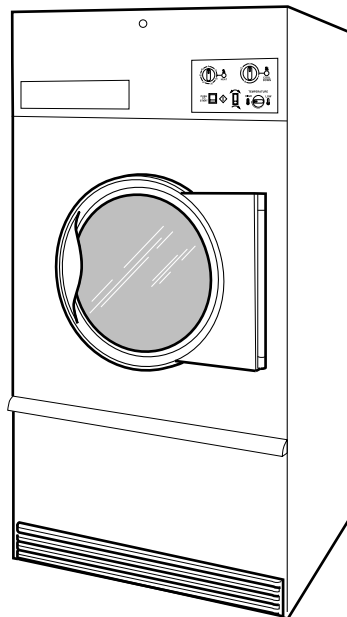


# Drying Tumblers

50 Pound Capacity

Refer to Page 5 for Model Numbers

Service



TMB795C

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(continued)

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# Section 1

## Safety Information

Throughout this manual and on machine decals, you will find precautionary statements (“CAUTION”, “WARNING”, and “DANGER”) followed by specific instructions. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

|                                                                                                                                                                 |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                                                                                | <b>DANGER</b> |
| <p><b>DANGER</b> indicates the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the danger is ignored.</p> |               |

|                                                                                                                                                                  |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                 | <b>WARNING</b> |
| <p><b>WARNING</b> indicates the presence of a hazard that can cause severe personal injury, death, or substantial property damage if the warning is ignored.</p> |                |


|                                                                                                                                                     |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                  | <b>CAUTION</b> |
| <p><b>CAUTION</b> indicates the presence of a hazard that will or can cause minor personal injury or property damage if the caution is ignored.</p> |                |

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

**IMPORTANT:** The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.


**NOTE:** The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.


In the interest of safety, some general precautions relating to the operation of this machine follow.


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>WARNING</b> |
| <ul style="list-style-type: none"><li>• Failure to install, maintain and/or operate this product according to the manufacturer’s instructions may result in conditions which can produce serious injury, death and/or property damage.</li><li>• Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in this Service Manual and unless you understand and have the skills to carry out the servicing.</li><li>• Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury or death.</li></ul> |                |
| <p>W006R2</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |

## Section 1 Safety Information

**IMPORTANT INFORMATION:** During the lifetime of a tumbler, it may require service. The information contained in this manual was written and is intended for use by qualified service technicians who are familiar with the safety procedures required in the repair of a tumbler, and who are equipped with the proper tools and testing equipment.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                                                                                                                                                                                                                                                                                   | <b>WARNING</b> |
| <p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none"><li>• Disconnect electric power to the tumbler before servicing.</li><li>• Never start the tumbler with any guards/panels removed.</li><li>• Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.</li></ul> <p style="text-align: right;">W240</p> |                |

|                                                                                                                                                                                                                                                                                                    |                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                                                                                                                  | <b>WARNING</b> |
| <p>Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly or adjustments subjecting you or the inexperienced person making such repairs to the risk of serious injury, electrical shock or death.</p> <p style="text-align: right;">W007</p> |                |

|                                                                                                                                                                                                                                                                                                                                                    |                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                                                                                                                                                                 | <b>CAUTION</b> |
| <p>If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures.</p> <p style="text-align: right;">W008</p> |                |

**NOTE:** The WARNING and IMPORTANT instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which CANNOT be built into this tumbler. These factors MUST BE supplied by the person(s) installing, maintaining or operating the tumbler.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

## Locating An Authorized Service Person

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Alliance Laundry Systems also recommends contacting an authorized technician and using authorized factory parts.

# Section 2

## Introduction

### Model Identification

Information in this manual is applicable to these models†:

| Gas    |        | Steam  |        | Electric |        |
|--------|--------|--------|--------|----------|--------|
| AT050L | PA050L | AT050S | PU050S | GT050E   | PU050E |
| AT050N | PA050N | GU050S | ST050S | GU050E   | ST050E |
| GT050L | PT050L | HT050S | SU050S | HT050E   | SU050E |
| GU050L | PT050N | HU050S | UT050S | HU050E   | UT050E |
| GU050N | PU050L | PT050S | UU050S | LU050E   | UU050E |
| HA050L | PU050N |        |        | PT050E   |        |
| HA050N | SA050L |        |        |          |        |
| HT050L | SA050N |        |        |          |        |
| HT050N | ST050L |        |        |          |        |
| HU050L | ST050N |        |        |          |        |
| HU050N | SU050L |        |        |          |        |
| LT050L | SU050N |        |        |          |        |
| LT050N | UA050L |        |        |          |        |
| LU050L | UA050N |        |        |          |        |
| LU050N | UT050L |        |        |          |        |
|        | UT050N |        |        |          |        |
|        | UU050L |        |        |          |        |
|        | UU050N |        |        |          |        |

†Includes models with control suffixes:

|                                      |                              |                                            |
|--------------------------------------|------------------------------|--------------------------------------------|
| BC - basic electronic, coin          | MT - manual timer            | RM - reversing OPL micro                   |
| BL - basic electronic, central pay   | NC - NetMaster coin          | RT - reversing manual timer                |
| BX - basic electronic, prep for coin | NR - NetMaster card          | ZC - NetMaster coin network ready          |
| BY - basic electronic, prep for card | NX - NetMaster prep for coin | ZR - NetMaster card network ready          |
| CD - rotary coin drop                | NY - NetMaster prep for card | ZX - NetMaster prep for coin network ready |
| CX - prep for coin drop              | OM - OPL micro               | ZY - NetMaster prep for card network ready |
| CY - prep for card                   |                              |                                            |

## Customer Service

If literature or replacement parts are required, contact the source from whom the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name and address of the nearest authorized parts distributor.

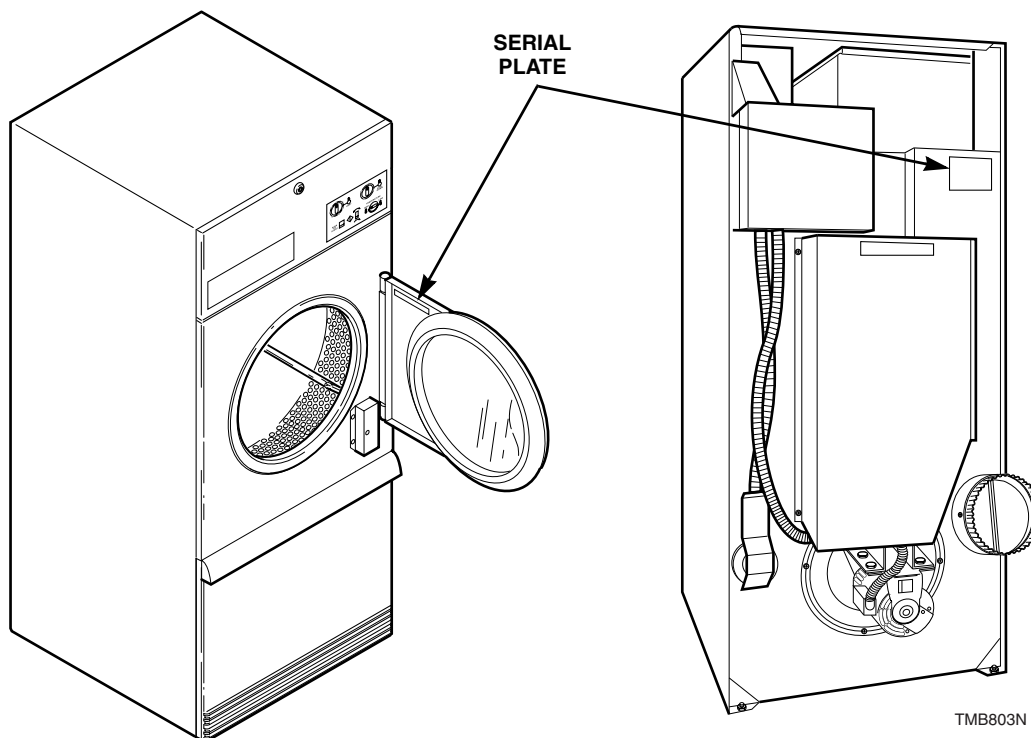
For technical assistance, call (920) 748-3121.

## Wiring Diagram

The wiring diagram is located in the contactor box.

## Serial Plate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are found on serial plate on the rear of machine and inside door.



# Safety Warnings and Decals

SAFETY WARNINGS and decals have been provided in key locations to remind you of important precautions for the safe operation and maintenance of your tumbler. Please take the time to review these warnings before proceeding with service work.

All decals have been designed and applied to withstand washing and cleaning. Decals should be checked periodically to be sure they have not been damaged, removed, or painted. Refer to *Parts Manual* for ordering replacement decals.

## Safety Precautions for Servicing Tumblers

### Prior to servicing tumbler:

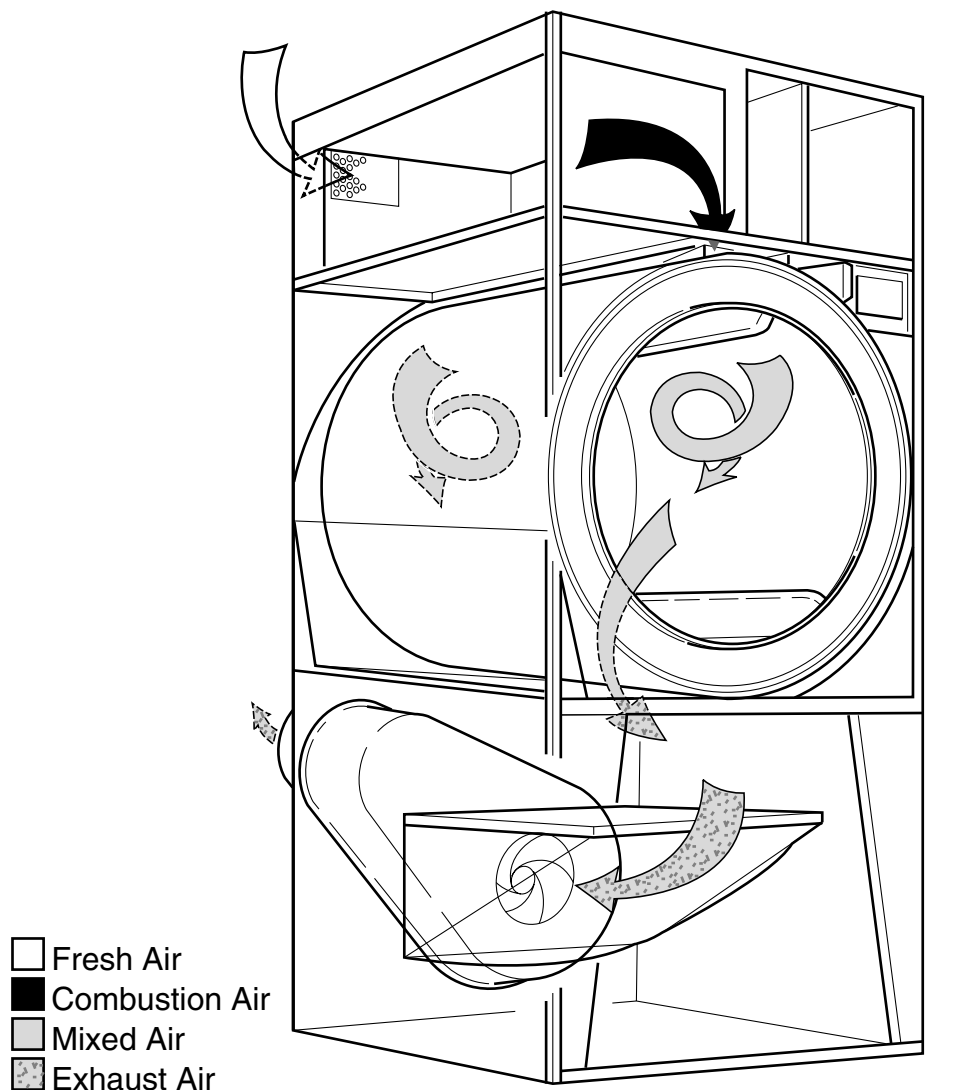
- **Disconnect electrical service and “lockout” to prevent unintentional connection.**
- **Shut off supply gas valve.**
- **Allow machine to cool prior to servicing.**

### After servicing tumbler:

- **Control/access panels must be reinstalled.**
- **Motor/drive/belt guards must be reinstalled.**
- **Contactor/junction/accessory box covers must be reinstalled.**
- **Use a non-corrosive leak detection solution to check all pipe connections for gas leaks. DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS!**
- **The loading door switch, lint door switch and airflow switch must be operating properly.**



## How A Tumbler Works



TMB1748S

The tumbler uses heat, air and movement to dry loads of laundry.


When the motor is started, the exhaust fan pulls fresh air in through the air intake and over the heat source (burner flame for gas, heating element for electric, and coil for steam).

The heated air moves into the cylinder, where it is circulated through the laundry by the tumbling action of the cylinder.

The air then passes through the lint filter, exhaust fan, and is vented to the outdoors.

# Section 3

## Troubleshooting

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <h3>WARNING</h3> |
| <p><b>To reduce the risk of electric shock, fire, explosion, serious injury or death:</b></p> <ul style="list-style-type: none"> <li>• Disconnect electric power to the tumbler before servicing.</li> <li>• Close gas shut-off valve to gas tumbler before servicing.</li> <li>• Close steam valve to steam tumbler before servicing.</li> <li>• Never start the tumbler with any guards/panels removed.</li> <li>• Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.</li> </ul> |                  |
| W002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |

**IMPORTANT:** Refer to appropriate wiring diagram for aid in testing tumbler components.

### 1. MOTOR DOES NOT START

| POSSIBLE CAUSE                                                                         | TO CORRECT                                                                   |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Electrical power off or fuses blown.                                                   | • Check power and fuses. Replace fuses if necessary.                         |
| Loading door not closed or inoperative door switch.                                    | • Close door, or test switch and replace if inoperative.                     |
| Lint door not closed or inoperative lint door switch.                                  | • Close lint door, confirm switch is positioned to actuate with door closed. |
| Trunnion shaft assembly binding in trunnion housing bearings.                          | • Replace trunnion housing bearings.                                         |
| Start circuit not completed.                                                           | • Press start switch, or test switch and replace if inoperative.             |
| Idler shaft binding in idler housing bearings.                                         | • Replace bearings.                                                          |
| Inoperative motor.                                                                     | • Have motor tested and replace if inoperative.                              |
| Non-Metered Models: Timer improperly set.                                              | • Turn drying timer clockwise to desired setting.                            |
| Non-Metered Models: Inoperative timer or relay.                                        | • Test timer and relay and replace if inoperative.                           |
| Metered Models: Improper coins inserted in accumulator.                                | • Check that proper coins are inserted.                                      |
| Metered Models (CD models): Accumulator knob improperly set after coins were inserted. | • Turn knob clockwise to its full limit of travel.                           |
| Metered Models (CD models): Inoperative run switch (accumulator).                      | • Test run switch and replace if inoperative.                                |
| Broken, loose, or incorrect wiring.                                                    | • Refer to wiring diagram located inside contactor box.                      |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 2. MOTOR OVERLOAD PROTECTOR CYCLES REPEATEDLY

| POSSIBLE CAUSE                      | TO CORRECT                                                                                |
|-------------------------------------|-------------------------------------------------------------------------------------------|
| Incorrect voltage.                  | • Refer to the <i>Installation Manual</i> for electrical requirements.                    |
| Clothes load too large.             | • Remove part of load.                                                                    |
| Clothes cylinder is binding.        | • Check cylinder for binding. Refer to <i>Adjustment</i> Section for cylinder adjustment. |
| Inadequate wiring.                  | • Check with an electrician to ensure that wiring is adequate.                            |
| Inadequate make-up air.             | • Refer to <i>Installation Manual</i> for make-up air requirements.                       |
| Poor maintenance.                   | • Clean lint accumulation on and around the motor.                                        |
| Broken, loose, or incorrect wiring. | • Refer to wiring diagram located inside contactor box.                                   |

### 3. MOTOR RUNS BUT CYLINDER DOES NOT TURN.

| POSSIBLE CAUSE                                                                          | TO CORRECT                                                                                       |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Motor drive pulley loose.                                                               | • Confirm key is in place, tighten setscrews.                                                    |
| Sheave loose.                                                                           | • Confirm key is in place, tighten setscrews and bushing.                                        |
| Broken or loose belt.                                                                   | • Replace or adjust belt.                                                                        |
| Cylinder is binding.                                                                    | • Check cylinder for binding. Refer to <i>Adjustment</i> Section for proper cylinder adjustment. |
| Cylinder turn counterclockwise when viewed from front of machine. (3 Phase models only) | • Switch power leads L1 and L2 to correct rotation.                                              |

### 4. MOTOR DOES NOT STOP

| POSSIBLE CAUSE                                  | TO CORRECT                                              |
|-------------------------------------------------|---------------------------------------------------------|
| Inoperative door switch.                        | • Test switch and replace if inoperative.               |
| Non-Metered Models: Inoperative timer or relay. | • Test timer and relay and replace if inoperative.      |
| Metered Models: Inoperative accumulator.        | • Test accumulator and replace if inoperative.          |
| Incorrect wiring.                               | • Refer to wiring diagram located inside contactor box. |
| Inoperative motor relay or motor contactor.     | • Check relay/contactator and replace if inoperative.   |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 5. HEATING ELEMENT DOES NOT HEAT OR BURNER DOES NOT IGNITE

| POSSIBLE CAUSE                                                  | TO CORRECT                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Improper or inadequate exhaust or make-up air system.           | • Refer to the <i>Installation Manual</i> for exhaust and make-up air requirements.                                                                                                                                                           |
| Blown fuses or tripped circuit breakers.                        | • Check fuses or circuit breakers.                                                                                                                                                                                                            |
| Drying timer not selected or inoperative.                       | • Set drying timer or replace if necessary.                                                                                                                                                                                                   |
| “No Heat” selected on control.                                  | • Select temperature option.                                                                                                                                                                                                                  |
| Inoperative control relay.                                      | • Test relay and replace if inoperative.                                                                                                                                                                                                      |
| Inoperative thermistor.                                         | • Test thermistor by removing harness from thermistor terminals. Check resistance across terminals, should read approximately 50,000 Ohms at 77°F. Resistance should decrease with a temperature increase. Replace thermistor if inoperative. |
| Electric Models:<br>Inoperative heating elements or contactors. | • Check heat contactors and elements. Replace if necessary.                                                                                                                                                                                   |
| Gas Models:<br>Insufficient gas supply.                         | • Open partially closed gas shut-off valve, or correct low gas pressure. Check inlet pressure and compare to pressure specified on serial plate. If pressure cannot be obtained, contact gas supplier.                                        |
| Gas Models:<br>Incorrect orifices.                              | • Tumbler is equipped for type of gas specified on serial plate at 0-2,000 feet altitude. Refer to <i>Installation Manual</i> .                                                                                                               |
| Gas Models:<br>Inoperative gas valve coils.                     | • Test coils and replace if available as a service part, otherwise replace valve.                                                                                                                                                             |
| Gas Models: Inoperative igniter.                                | • Test igniter and replace if inoperative.                                                                                                                                                                                                    |
| Gas Models: Inoperative igniter control.                        | • Test igniter control and replace if inoperative.                                                                                                                                                                                            |

(continued on next page)



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 5. HEATING ELEMENT DOES NOT HEAT OR BURNER DOES NOT IGNITE (*continued*)

| POSSIBLE CAUSE                                                 | TO CORRECT                                                                                                                                                                                                                    |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gas and Electric Models:<br>Inoperative high limit thermostat. | <ul style="list-style-type: none"> <li>• Test thermostat and replace if inoperative.</li> </ul>                                                                                                                               |
| Gas and Electric Models:<br>Inoperative airflow switch.        | <ul style="list-style-type: none"> <li>• Clean lint compartment after every eight hour shift.</li> </ul>                                                                                                                      |
|                                                                | <ul style="list-style-type: none"> <li>• Check back draft damper for foreign objects, lint accumulation, or other causes that may prevent damper from opening.</li> </ul>                                                     |
|                                                                | <ul style="list-style-type: none"> <li>• Check ductwork for lint build-up. Refer to <i>Installation Manual</i> to ensure that ductwork and make-up air openings are sized properly.</li> </ul>                                |
|                                                                | <ul style="list-style-type: none"> <li>• Check exhaust outlet. If a screen has been installed on the outlet, it may be clogged with lint or frozen over in winter. NEVER install a screen over the exhaust outlet.</li> </ul> |
| Gas and Electric Models:<br>Airflow switch out of adjustment.  | <ul style="list-style-type: none"> <li>• Refer to <i>Adjustment</i> Section for airflow switch adjustment.</li> </ul>                                                                                                         |
| Lint door panel not closed properly.                           | <ul style="list-style-type: none"> <li>• Open lint door panel. Place lint door panel back on tumbler ensuring a tight fit.</li> </ul>                                                                                         |
| Broken, loose, or incorrect wiring.                            | <ul style="list-style-type: none"> <li>• Refer to wiring diagram located inside contactor box.</li> </ul>                                                                                                                     |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 6. IGNITER DOES NOT SHUT OFF AFTER GAS IGNITION — GAS BURNER

| POSSIBLE CAUSE                                            | TO CORRECT                                                                                                                                                                       |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tumbler not properly equipped for type of gas being used. | <ul style="list-style-type: none"> <li>• Tumbler is equipped for type of gas specified on serial plate at 0-2,000 feet altitude. Refer to <i>Installation Manual</i>.</li> </ul> |
| Insufficient gas supply.                                  | <ul style="list-style-type: none"> <li>• Open partially closed gas shut-off valve, or correct low gas pressure.</li> </ul>                                                       |
| Improperly adjusted burner flame.                         | <ul style="list-style-type: none"> <li>• Refer to <i>Adjustment</i> Section for recommended burner flame adjustment.</li> </ul>                                                  |
| Electrode assembly incorrectly installed.                 | <ul style="list-style-type: none"> <li>• Check assembly for correct alignment.</li> </ul>                                                                                        |
| Inoperative igniter control.                              | <ul style="list-style-type: none"> <li>• Test igniter control and replace if inoperative.</li> </ul>                                                                             |
| Incorrect wiring.                                         | <ul style="list-style-type: none"> <li>• Refer to wiring diagram located inside contactor box.</li> </ul>                                                                        |

### 7. HEATING ELEMENT OR BURNER SHUTS OFF PREMATURELY

| POSSIBLE CAUSE                                                     | TO CORRECT                                                                                                                                                                       |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Improper or inadequate exhaust and/or make-up air system.          | <ul style="list-style-type: none"> <li>• Refer to <i>Installation Manual</i> for exhaust and make-up air requirements.</li> </ul>                                                |
| Gas Models:<br>Insufficient gas supply.                            | <ul style="list-style-type: none"> <li>• Open partially closed gas shut-off valve, or correct low pressure.</li> </ul>                                                           |
| Gas Models:<br>Tumbler not properly equipped for type of gas used. | <ul style="list-style-type: none"> <li>• Tumbler is equipped for type of gas specified on serial plate at 0-2,000 feet altitude. Refer to <i>Installation Manual</i>.</li> </ul> |
| Gas Models:<br>Improperly adjusted burner flame.                   | <ul style="list-style-type: none"> <li>• Refer to <i>Adjustment</i> Section for burner flame adjustment.</li> </ul>                                                              |
| Cycling off on high limit thermostat.                              | <ul style="list-style-type: none"> <li>• Refer to <i>Paragraph 8</i>.</li> </ul>                                                                                                 |
| Broken, loose or incorrect wiring.                                 | <ul style="list-style-type: none"> <li>• Refer to wiring diagram located inside contactor box.</li> </ul>                                                                        |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 8. HEATING ELEMENT OR BURNER REPEATEDLY CYCLES OFF ON HIGH LIMIT THERMOSTAT

| POSSIBLE CAUSE                                                                | TO CORRECT                                                                                             |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| External exhaust system is longer than recommended or inadequate make-up air. | • Refer to <i>Installation Manual</i> for exhaust and make-up air requirements.                        |
| Clogged lint screen.                                                          | • Remove screen and clean. Lint screen and compartment should be cleaned after every eight hour shift. |
| Lint in tumbler ducts.                                                        | • Clean tumbler ducts.                                                                                 |
| Lint in external exhaust system.                                              | • Disassemble exhaust system and clean.                                                                |
| High limit thermostat cycling at too low a temperature.                       | • Replace thermostat.                                                                                  |
| Lint door panel not closed properly.                                          | • Open lint door panel, place lint door panel back on tumbler ensuring a tight fit.                    |
| Backdraft damper not operating.                                               | • Check for foreign objects, lint accumulation or other possible obstructions.                         |

### 9. HEATING ELEMENT OR BURNER DOES NOT SHUT-OFF

| POSSIBLE CAUSE                                                              | TO CORRECT                                              |
|-----------------------------------------------------------------------------|---------------------------------------------------------|
| Gas Models:<br>Impurities on gas valve seat, preventing valve from closing. | • Replace gas valve.                                    |
| Inoperative drying timer, relay or contactor.                               | • Replace timer, relay or contactor.                    |
| Incorrect wiring.                                                           | • Refer to wiring diagram located inside contactor box. |

### 10. CLOTHES DO NOT DRY

| POSSIBLE CAUSE                          | TO CORRECT                                                          |
|-----------------------------------------|---------------------------------------------------------------------|
| Heat source inoperative.                | • Refer to <i>Paragraph 5</i> .                                     |
| Too much water in articles being dried. | • Remove excess water.                                              |
| Clothes load too large.                 | • Remove part of load.                                              |
| Improper or inadequate exhaust system.  | • Refer to <i>Installation Manual</i> for exhaust requirements.     |
| Heat source shuts-off prematurely.      | • Refer to <i>Paragraph 7</i> .                                     |
| Drying timer improperly set.            | • Set selector for higher setting.                                  |
| Incorrect voltage.                      | • Refer to <i>Installation Manual</i> for electrical requirements.  |
| Inadequate make-up air.                 | • Refer to <i>Installation Manual</i> for make-up air requirements. |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 11. TUMBLER OVERHEATING

| POSSIBLE CAUSE                                        | TO CORRECT                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gas Models:<br>Incorrect main burner orifices.        | <ul style="list-style-type: none"> <li>• Replace orifices. Refer to the <i>Installation Manual</i> for burner orifice requirements.</li> </ul>                                                                                                                                                  |
| Gas Models:<br>Gas pressure too high.                 | <ul style="list-style-type: none"> <li>• Gas pressure must be as specified on serial plate.</li> </ul>                                                                                                                                                                                          |
| Inadequate make-up air.                               | <ul style="list-style-type: none"> <li>• Refer to <i>Installation Manual</i> for make-up air requirements.</li> </ul>                                                                                                                                                                           |
| Lint accumulation.                                    | <ul style="list-style-type: none"> <li>• Remove lint.</li> </ul>                                                                                                                                                                                                                                |
| Restricted or inadequate exhaust system.              | <ul style="list-style-type: none"> <li>• Remove obstruction or lint build-up from exhaust ductwork. Refer to the <i>Installation Manual</i> for exhaust system requirements.</li> </ul>                                                                                                         |
| Inoperative thermistor.                               | <ul style="list-style-type: none"> <li>• Test thermistor by removing harness from thermistor terminals. Check resistance across terminals, should read approximately 50,000 Ohms at 77°F. Resistance should decrease with a temperature increase. Replace thermistor if inoperative.</li> </ul> |
| Inoperative cabinet limit or burner limit thermostat. | <ul style="list-style-type: none"> <li>• Check thermostats with Ohm meter and replace if open.</li> </ul>                                                                                                                                                                                       |

### 12. BURNERS NOT BURNING PROPERLY — GAS MODELS

| POSSIBLE CAUSE                            | TO CORRECT                                                                                                                                                                       |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burner air shutters incorrectly adjusted. | <ul style="list-style-type: none"> <li>• Refer to <i>Adjustment</i> Section for proper flame adjustment.</li> </ul>                                                              |
| Dirt in burners.                          | <ul style="list-style-type: none"> <li>• Disassemble burners and blow out the dirt.</li> </ul>                                                                                   |
| Gas pressure too high or too low.         | <ul style="list-style-type: none"> <li>• Check serial plate on back of the tumbler for correct gas pressure.</li> </ul>                                                          |
| Incorrect orifices.                       | <ul style="list-style-type: none"> <li>• Tumbler is equipped for type of gas specified on serial plate at 0-2,000 feet altitude. Refer to <i>Installation Manual</i>.</li> </ul> |
| Make-up air inadequate or pressured.      | <ul style="list-style-type: none"> <li>• Refer to <i>Installation Manual</i> for proper make-up air requirements.</li> </ul>                                                     |
| Restricted or blocked exhaust duct.       | <ul style="list-style-type: none"> <li>• Disassemble and clean exhaust system.</li> </ul>                                                                                        |

### 13. LOADING DOOR OPENS DURING OPERATION

| POSSIBLE CAUSE                   | TO CORRECT                                                                                                          |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Door strike improperly adjusted. | <ul style="list-style-type: none"> <li>• Refer to <i>Adjustment</i> Section for door strike adjustment.</li> </ul>  |
| Tumbler improperly leveled.      | <ul style="list-style-type: none"> <li>• Refer to <i>Adjustment</i> Section for leveling leg adjustment.</li> </ul> |





## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 14. TUMBLER RUNS BUT NO STEAM TO COILS — STEAM MODELS

| POSSIBLE CAUSE                         | TO CORRECT                                                                                                                                                                                                                                                                                              |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Valves closed.                         | <ul style="list-style-type: none"> <li>• Check all valves in supply and return lines, make sure they are open.</li> </ul>                                                                                                                                                                               |
| Blocked steam trap.                    | <ul style="list-style-type: none"> <li>• Remove trap and clean. Replace if inoperative.</li> </ul>                                                                                                                                                                                                      |
| Inoperative solenoid valve.            | <ul style="list-style-type: none"> <li>• Check operation of solenoid valve.</li> </ul>                                                                                                                                                                                                                  |
| Incorrect installation of check valve. | <ul style="list-style-type: none"> <li>• Check for inlet and outlet markings on check valve, and invert if necessary.</li> </ul>                                                                                                                                                                        |
| Clogged strainer.                      | <ul style="list-style-type: none"> <li>• Remove strainer and clean.</li> </ul>                                                                                                                                                                                                                          |
| Inoperative timer or thermistor.       | <ul style="list-style-type: none"> <li>• Test timer. Test thermistor by removing harness from thermistor terminals. Check resistance across terminals, should read approximately 50,000 Ohms at 77°F. Resistance should decrease with a temperature increase. Replace either if inoperative.</li> </ul> |

### 15. WATER IN STEAM LINE — STEAM MODELS

| POSSIBLE CAUSE                          | TO CORRECT                                                                                                                                                                                |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Incorrect installation of steam piping. | <ul style="list-style-type: none"> <li>• Refer to <i>Installation Manual</i> for steam requirements.</li> </ul>                                                                           |
| Trap functioning improperly.            | <ul style="list-style-type: none"> <li>• Check trap for size and capacity. If trap is dirty or sluggish clean thoroughly or replace. Check return line for high back pressure.</li> </ul> |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 16. TROUBLESHOOTING ELECTRONIC CONTROL MODELS

| PROBLEM                                                                     | POSSIBLE CAUSE                                | TO CORRECT                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Door Open light and display flash with door closed                          | Door switch faulty.                           | Replace door switch.                                                                                                                                                                                                                                                                                      |
|                                                                             | Lint panel switch faulty.                     | Replace lint panel switch.                                                                                                                                                                                                                                                                                |
|                                                                             | Electrical service connected incorrectly.     | Check service connections to terminal block in junction box. For 120 or 240 Volt tumblers, neutral wire must be connected to terminal marked "NEUT". On single phase tumblers, hot wire must be connected to terminal marked "L1". A ground wire must be secured to the ground screw in the junction box. |
| Display shows "SH" and signals sounds                                       | Temperature at sensor is over 191°F (88.3°C). | Allow tumbler to cool and press ON/SELECT pad. If display still shows "SH", replace sensor.                                                                                                                                                                                                               |
|                                                                             | Temperature sensor shorted.                   | Replace temperature sensor.                                                                                                                                                                                                                                                                               |
| Display shows "OP" and signal sounds three minutes after tumbler is started | Temperature at sensor is under 24°F (-4.4°C). | If the temperature of the tumbler is above 24°F (-4.4°C), replace temperature sensor.                                                                                                                                                                                                                     |
|                                                                             | Temperature sensor open.                      | Replace temperature sensor.                                                                                                                                                                                                                                                                               |



## WARNING

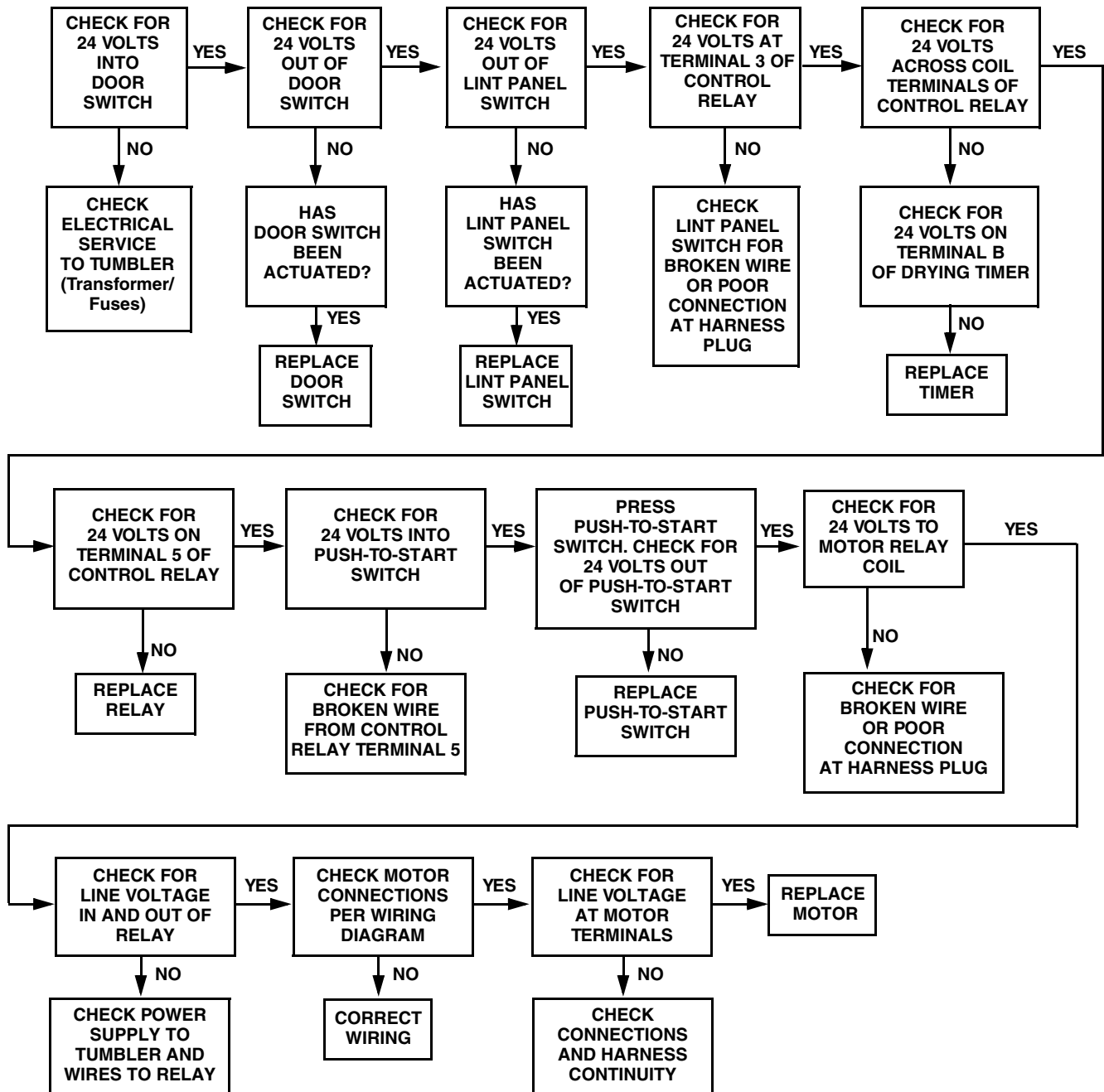
To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 17. TUMBLER WILL NOT START, TIME ON DRYING TIMER, DOOR CLOSED

(Manual Timer Models)





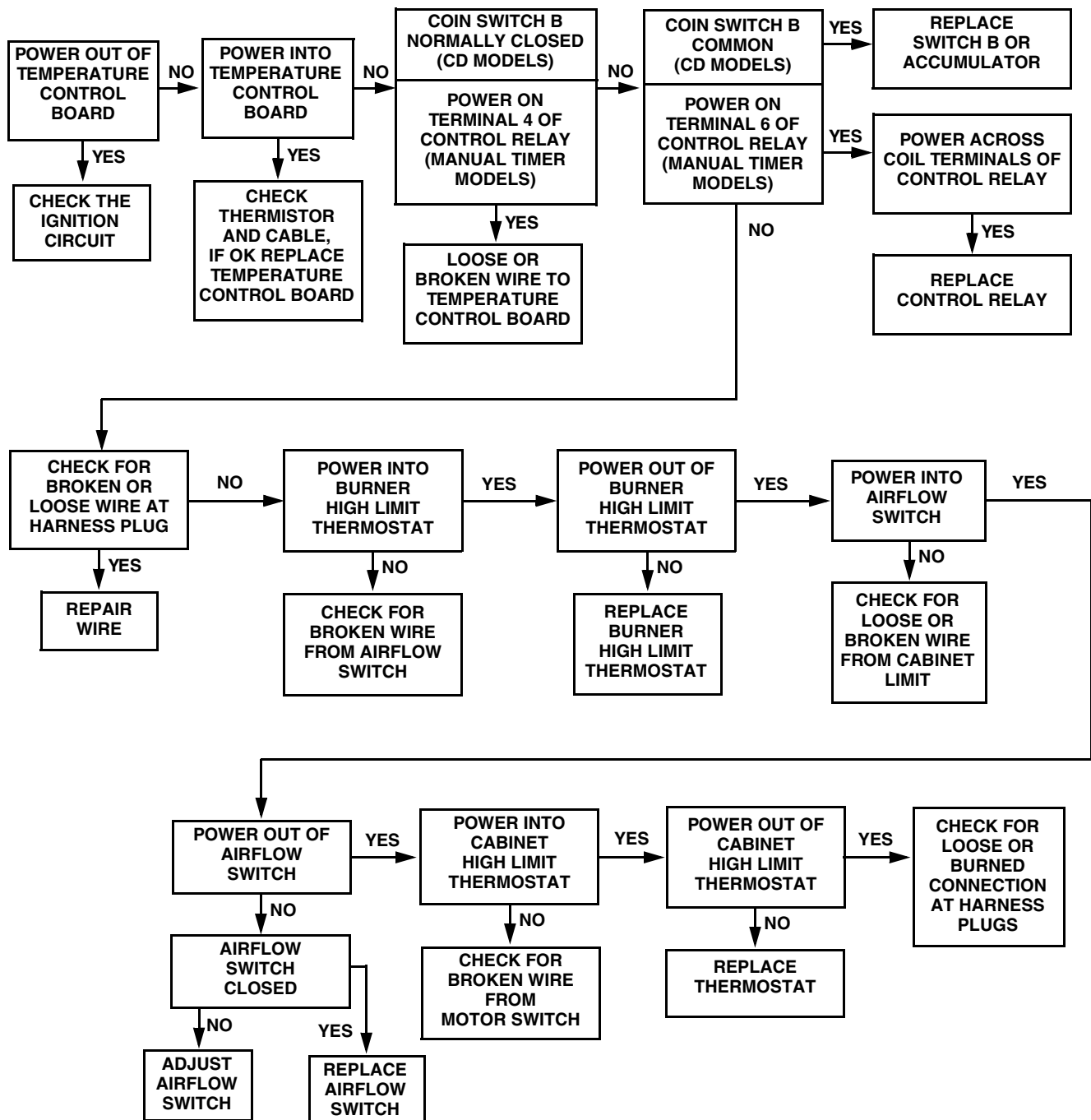
## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 18. MOTOR RUNS, TIME ON DRYING TIMER BUT NO HEAT





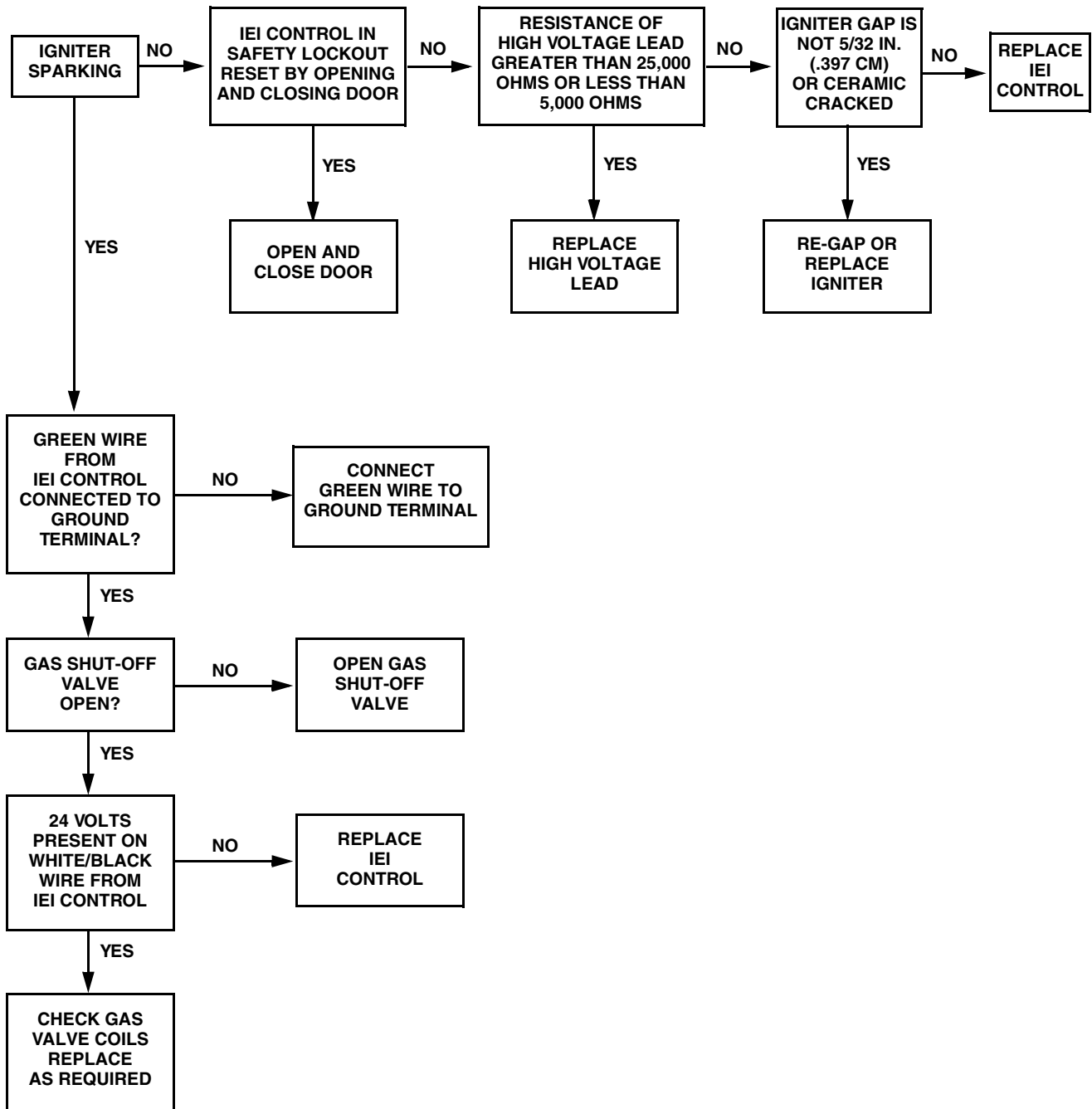
## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 19. NO MAIN BURNER FLAME, IGNITER DOES NOT SPARK





## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 20. STEAM OM MODELS: NO HEAT WITH CYCLE SELECTED, UNIT RUNNING AND CALLING FOR HEAT

120 Volt/60 Hertz/1 Phase and 208-240 Volt/60 Hertz/1 Phase Nonreversing

460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing

| Step | Problem                                                                            | If No, then                                                                |
|------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 1    | Is there voltage at H2-13? If yes, continue to next step.                          | Replace micro control.                                                     |
| 2    | Is there voltage at H2-6? If yes, continue to next step.                           | Correct wiring between H2-6 and H2-13.                                     |
| 3    | Is there voltage at H2-5? If yes, continue to next step.                           | Check for proper thermistor operation. Replace micro control if necessary. |
| 4    | Is there voltage to the input of the motor relay? If yes, continue to next step.   | Correct wiring between motor relay and micro control.                      |
| 5    | Is there voltage to the output of the motor relay?                                 | Replace motor relay.                                                       |
| 6    | Is there voltage to the input of the motor switch? If yes, continue to next step.  | Correct wiring to motor switch.                                            |
| 7    | Is there voltage to the output of the motor switch? If yes, continue to next step. | Replace motor.                                                             |
| 8    | Is there voltage across the steam valve coil? If yes, continue to next step.       | Correct wiring to steam valve coil.                                        |
| 9    | Unit operational. If unit still doesn't heat, check steam supply.                  |                                                                            |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 21. OM AND RM MODELS: NO START WITH CYCLE SELECTED, START BUTTON PRESSED AND DOOR CLOSED

120 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing

208-240 Volt/60 Hertz/1 or 3 Phase Steam Nonreversing

208-240 Volt/60 Hertz/3 Phase Electric Nonreversing

460-480 Volt/60 Hertz/3 Phase Gas, Electric and Steam Nonreversing

| Step | Problem                                                                                         | If No, then                                                         |
|------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 1    | Is there voltage to the primary of the transformer? If yes, continue to next step.              | Correct wiring to transformer primary. Check fuses.                 |
| 2    | Is there 24 VAC across terminals 2 & 3 of transformer secondary? If yes, continue to next step. | Replace transformer.                                                |
| 3    | Is there voltage to the COM terminal of the door switch? If yes, continue to next step.         | Correct wiring between door switch and transformer. Check fuse.     |
| 4    | Is there voltage to the N.O. terminal of the door switch? If yes, continue to next step.        | Check door switch for proper operation. Replace if necessary.       |
| 5    | Is there voltage to the COM terminal of the lint panel switch? If yes, continue to next step.   | Correct wiring between lint panel switch and loading door switch.   |
| 6    | Is there voltage to the N.O. terminal of the lint panel switch? If yes, continue to next step.  | Check lint panel switch for proper operation. Replace if necessary. |
| 7    | Is there voltage to terminal H2-8 on the micro control? If yes, continue to next step.          | Correct wiring between micro control and lint panel switch.         |
| 8    | Is there voltage at terminal H2-7 on the micro control? If yes, continue to next step.          | Replace micro control.                                              |
| 9    | Is there voltage across the coil of motor relay? If yes, continue to next step.                 | Correct wiring between motor relay and micro control.               |
| 10   | Is there voltage to the input of the motor relay? If yes, continue to next step.                | Correct wiring between motor relay and supply voltage.              |
| 11   | Is there voltage to the output of the motor relay? If yes, continue to next step.               | Replace motor relay.                                                |
| 12   | Does the motor operate? If yes, continue to next step.                                          | Replace motor.                                                      |
| 13   | Unit operational.                                                                               |                                                                     |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

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### 22. OM MODELS: NO DISPLAY AFTER SELECTING ONE OF THE ON/SELECT KEYS

120 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing

208-240 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing

208-240 Volt/60 Hertz/3 Phase Gas and Steam Reversing/Nonreversing

208-240 Volt/60 Hertz/3 Phase Electric Reversing/Nonreversing

460-480 Volt/60 Hertz/3 Phase Gas, Electric and Steam Reversing/Nonreversing

| Step | Problem                                                                                                | If No, then                                                         |
|------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 1    | Is there voltage across the primary of the transformer? If yes, continue to next step.                 | Correct wiring between transformer and supply voltage. Check fuses. |
| 2    | Is there 24 VAC across terminals 1 & 4 of transformers secondary? If yes, continue to next step.       | Replace transformer.                                                |
| 3    | Is there 24 VAC across terminals H3-3 and H3-4 on the micro control? If yes, continue to next step.    | Correct wiring between H3 and transformer.                          |
| 4    | Is there voltage to the input of the fuse on the micro control? If yes, continue to next step.         | Replace micro control.                                              |
| 5    | Is there voltage to the opposite side of the fuse on the micro control? If yes, continue to next step. | Check fuse making sure it is not blown. Replace if necessary.       |
| 6    | Replace micro control.                                                                                 |                                                                     |





## WARNING

**To reduce the risk of electric shock, fire, explosion, serious injury or death:**

- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

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### 23. ELECTRIC OM MODELS: NO HEAT WITH CYCLE SELECTED, UNIT RUNNING AND CALLING FOR HEAT

**460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing**

| Step | Problem                                                                                                                                           | If No, then                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1    | Is there voltage at H2-13? If yes, continue to next step.                                                                                         | Replace micro control.                                                            |
| 2    | Is there voltage at H2-6? If yes, continue to next step.                                                                                          | Correct wiring between H2-6 and H2-13.                                            |
| 3    | Is there voltage at H2-5? If yes, continue to next step.                                                                                          | Check for proper thermistor operation. Replace micro control if necessary.        |
| 4    | Is there voltage to terminal 14 of the motor relay? If yes, continue to next step.                                                                | Correct wiring between motor relay and micro control.                             |
| 5    | Is there voltage to terminal 13 of the motor relay? If yes, continue to next step.                                                                | Replace motor relay.                                                              |
| 6    | Is there voltage at white/brown fan motor centrifugal switch?                                                                                     | Correct wiring between relay and motor switch.                                    |
| 7    | Is there voltage at orange/brown fan motor centrifugal switch?                                                                                    | Replace motor.                                                                    |
| 8    | Is there voltage to cabinet limit black wire?                                                                                                     | Correct wiring between fan motor centrifugal switch and cabinet limit thermostat. |
| 9    | Is there voltage out of cabinet limit white wire?                                                                                                 | Replace thermostat.                                                               |
| 10   | Is there voltage to airflow switch orange wire (common terminal)?                                                                                 | Correct wiring between cabinet limit and airflow switch.                          |
| 11   | Is there voltage to the N.O. terminal of the airflow switch? If yes, continue to next step.                                                       | Check for proper airflow. Replace airflow switch.                                 |
| 12   | Is there voltage to the input of the stove limit? If yes, continue to next step.                                                                  | Correct wiring between stove limit and airflow switch.                            |
| 13   | Is there voltage to the output of the stove limit? If yes, continue to next step.                                                                 | Check for proper airflow. Replace stove limit if necessary.                       |
| 14   | Is there voltage across coil of HC1?                                                                                                              | Correct wiring to HC1.                                                            |
| 15   | Is there voltage to terminals T1, T2 and T3 of HC1? If yes, continue to next step.                                                                | Correct wiring between HC1 and supply.                                            |
| 16   | Is there voltage to terminals L1, L2 and L3 of HC1?                                                                                               | Replace HC1.                                                                      |
| 17   | Is there voltage across the elements? If yes, then continue to next step.                                                                         | Correct wiring to the elements.                                                   |
| 18   | Do the elements produce heat? If yes, continue to Step 16.<br><br>NOTE: If elements are glowing a bright red/orange, there is not enough airflow. | Check for opens or shorts in the elements.                                        |
| 19   | Unit operational.                                                                                                                                 |                                                                                   |

(continued)



## WARNING

**To reduce the risk of electric shock, fire, explosion, serious injury or death:**

- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**


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### 24. GAS OM MODELS: NO HEAT WITH CYCLE SELECTED, UNIT RUNNING AND CALLING FOR HEAT

**120 Volt/60 Hertz/1 Phase and 208-240 Volt/60 Hertz/1 Phase Nonreversing**

**460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing**

| Step | Problem                                                                                        | If No, then                                                                                              |
|------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 1    | Is there voltage at H2-13? If yes, continue to next step.                                      | Replace micro control.                                                                                   |
| 2    | Is there voltage at H2-6 of the micro control?<br>If yes, continue to next step.               | Correct wiring between H2-6 and H2-13 on the micro control.                                              |
| 3    | Is there voltage at H2-5 of the micro control?<br>If yes, continue to next step.               | Check for proper thermistor operation. Replace micro control if necessary.                               |
| 4    | Is there voltage to input of the motor relay? If yes, continue to next step.                   | Correct wiring between motor relay and micro control.                                                    |
| 5    | Is there voltage to the output of the motor relay? If yes, continue to next step.              | Replace motor relay.                                                                                     |
| 6    | Is there voltage to the input of fan motor switch? If yes, continue to next step.              | Correct wiring to fan motor switch?                                                                      |
| 7    | Is there voltage out from the fan motor switch? If yes, continue to next step.                 | Replace fan motor.                                                                                       |
| 8    | Is there voltage to the input of the cabinet limit? If yes, continue to next step.             | Correct wiring between cabinet limit and CR1.                                                            |
| 9    | Is there voltage to the output of the cabinet limit? If yes, continue to next step.            | Replace cabinet limit.                                                                                   |
| 10   | Is there voltage to COM terminal of the airflow switch?<br>If yes, continue to next step.      | Correct wiring between airflow switch and cabinet limit.                                                 |
| 11   | Is there voltage to the N.O. terminal of the airflow switch?<br>If yes, continue to next step. | Check for proper operation and airflow. Replace airflow switch if necessary.                             |
| 12   | Is there voltage to the input of the stove limit? If yes, continue to next step.               | Correct wiring between stove limit and airflow switch.                                                   |
| 13   | Is there voltage to the output of the stove limit? If yes, continue to next step.              | Check for proper airflow. Replace stove limit if necessary.                                              |
| 14   | Is there voltage to terminal 2 of the ignition control?<br>If yes, continue to next step.      | Correct wiring between ignition control and stove limit.                                                 |
| 15   | Does the igniter spark? If yes, continue to next step.                                         | Check for proper gap on igniter and check for proper resistance of ignition cable. Replace if necessary. |
| 16   | Is there voltage at terminal 1 of the ignition control? If yes, continue to next step.         | Replace ignition control.                                                                                |
| 17   | Is there voltage across the gas valve? If yes, continue to next step.                          | Correct wiring to gas valve.                                                                             |
| 18   | Is there a flame? If yes, continue to next step.                                               | Check for gas flow and proper gas pressure. Replace gas valve or coils of gas valve.                     |
| 19   | Unit operational.                                                                              |                                                                                                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <h2 style="margin: 0;">WARNING</h2> |
| <p><b>To reduce the risk of electric shock, fire, explosion, serious injury or death:</b></p> <ul style="list-style-type: none"> <li>• <b>Disconnect electric power to the tumbler before servicing.</b></li> <li>• <b>Close gas shut-off valve to gas tumbler before servicing.</b></li> <li>• <b>Close steam valve to steam tumbler before servicing.</b></li> <li>• <b>Never start the tumbler with any guards/panels removed.</b></li> <li>• <b>Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.</b></li> </ul> |                                     |
| W002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     |

**25. OM MODELS: NO FAN MOTOR ROTATION WITH CYCLE SELECTED AND START PRESSED**  
**208-240 Volt/60 Hertz/3 Phase and 480 Volt/60 Hertz/3 Phase Electric Reversing Models**  
**208-240 Volt/60 Hertz/3 Phase and 460-480 Volt/60 Hertz/3 Phase Gas Reversing and Steam Models**

| Step | Problem                                                                                             | If No, then                                                                      |
|------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1    | Is there voltage across the primary of the transformer?<br>If yes, continue to next step.           | Correct wiring to transformer. Check fuses.                                      |
| 2    | Is there 24 VAC across terminals 2 & 3 of the transformer secondary? If yes, continue to next step. | Replace transformer.                                                             |
| 3    | Is there voltage to the COM of the door switch?<br>If yes, continue to next step.                   | Correct wiring to door switch. Check fuse.                                       |
| 4    | Is there voltage to the N.O. terminal of the door switch?<br>If yes, continue to next step.         | Check door switch for proper operation. Replace if necessary.                    |
| 5    | Is there voltage into lint panel switch? If yes, continue to next step.                             | Correct wiring between door switch and lint panel switch.                        |
| 6    | Is there voltage out of lint panel switch? If yes, continue to next step.                           | If actuated replace inoperative switch. If not actuated adjust switch as needed. |
| 7    | Is there voltage to H2-8 of micro control? If yes, continue to next step.                           | Correct wiring between micro control and door switch.                            |
| 8    | Is there voltage to H2-7 of micro control? If yes, continue to next step.                           | Replace micro control.                                                           |
| 9    | Is there voltage across the coil of the M contactor? If yes, continue to next step.                 | Correct the wiring to the M contactor.                                           |
| 10   | Is there voltage to L1, L2 and L3 of the M contactor?<br>If yes, continue to next step.             | Correct wiring between M contactor and supply voltage.                           |
| 11   | Is there voltage to T1, T2 and T3 of the M contactor?<br>If yes, continue to next step.             | Replace M contactor.                                                             |
| 12   | Is there voltage across L1, L2 and L3 of the motor?<br>If yes, continue to next step.               | Correct wiring between motor and M contactor.                                    |
| 13   | Unit operational.                                                                                   |                                                                                  |



## WARNING

**To reduce the risk of electric shock, fire, explosion, serious injury or death:**

- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

### 26. OM REVERSING MODELS: NO CYLINDER ROTATION OR REVERSING CAPABILITIES

**208-240 Volt/60 Hertz/3 Phase and 480 Volt/60 Hertz/3 Phase Electric Models**

**208-240 Volt/60 Hertz/3 Phase and 460-480 Volt/60 Hertz/3 Phase Gas and Steam Models**

| Step | Problem                                                                                                                                     | If No, then                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1    | Is there voltage across the primary of the transformer?<br>If yes, continue to next step.                                                   | Correct wiring between transformer and supply voltage.<br>Check fuses.           |
| 2    | Is there voltage across terminals 2 & 3 of the transformer secondary? If yes, continue to next step.                                        | Replace transformer.                                                             |
| 3    | Is there voltage to the COM of the door switch?<br>If yes, continue to next step.                                                           | Correct wiring to door switch. Check fuses.                                      |
| 4    | Is there voltage to the N.O. terminal of the door switch?<br>If yes, continue to next step.                                                 | Correct wiring and check fuses.                                                  |
| 5    | Is there voltage into lint panel switch? If yes, continue to next step.                                                                     | Correct wiring between door switch and lint panel switch.                        |
| 6    | Is there voltage out of lint panel switch? If yes, continue to next step.                                                                   | If actuated replace inoperative switch. If not actuated adjust switch as needed. |
| 7    | Is there voltage to H2-8 terminal of micro control?<br>If yes, continue to next step for forward rotation, or Step 11 for reverse rotation. | Correct wiring between micro control and door switch.                            |
| 8    | Forward Rotation: Is there voltage to H2-3 of micro control? If yes, continue to next step.                                                 | Make sure unit is in the forward portion of rotation.<br>Replace micro control.  |
| 9    | Is there voltage across the coil of the forward relay?<br>If yes, continue to next step.                                                    | Correct the wiring to the relay.                                                 |
| 10   | Is there voltage to terminals L1, L2 and L3 of the forward relay? If yes, continue to next step.                                            | Correct wiring between relay and supply voltage.                                 |
| 11   | Is there voltage to terminals T1, T2 and T3 of the forward relay? If yes, continue to next step.                                            | Replace forward relay.                                                           |
| 12   | Is there voltage across L1, L2 and L3 of the motor?<br>If yes, continue Step 16.                                                            | Correct wiring between motor and forward relay.                                  |
| 13   | Reverse Rotation: Is there voltage to H2-4 of micro control? If yes, continue to next step.                                                 | Make sure unit is in the reverse portion of rotation.<br>Replace micro control.  |
| 14   | Is there voltage across the coil of the reverse relay?<br>If yes, continue to next step.                                                    | Correct the wiring to the relay.                                                 |
| 15   | Is there voltage to terminals X, Y and Z of the reversing relay? If yes, continue to next step.                                             | Correct wiring between relay and supply voltage.                                 |
| 16   | Is there voltage to terminals U, V and W of the reversing relay? If yes, continue to next step.                                             | Replace reversing relay.                                                         |
| 17   | Is there voltage across L1, L2 and L3 of the motor?<br>If yes, continue to next step.                                                       | Correct wiring between motor and reversing relay.                                |
| 18   | Does the motor turn? If yes, continue to next step.                                                                                         | Replace motor.                                                                   |
| 19   | Does the cylinder rotate? If yes, continue to next step.                                                                                    | Check drive components between motor and cylinder.                               |
| 20   | Unit operational.                                                                                                                           |                                                                                  |



## WARNING

**To reduce the risk of electric shock, fire, explosion, serious injury or death:**

- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

### 27. CD MODELS: NO START WITH VEND SATISFIED AND START BUTTON PRESSED IN

**NOTE: All voltage checks are referenced to neutral unless stated otherwise.**

| Step | Problem                                                                                                             | If No, then                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 1    | Is there voltage to NC terminal of switch A?<br>If yes, continue to next step.                                      | Correct wiring between L1 and switch A.                                                               |
| 2    | Is there voltage to the COM terminal of switch A?<br>If yes, continue to next step.                                 | Check for proper operation of switch A. Replace switch A if necessary.                                |
| 3    | Is there voltage to H1-2 at time delay board? If yes, continue to next step.                                        | Correct wiring between switch A and H1-2 at time delay board.                                         |
| 4    | Is there voltage to H1-3 at time delay board? If yes, continue to next step.                                        | Replace time delay board.                                                                             |
| 5    | Is there voltage to the common terminal of the door switch?<br>If yes, continue to next step.                       | Correct wiring between door switch and switch A.                                                      |
| 6    | With the door closed, is there voltage to the N.O. terminal of the door switch? If yes, continue to next step.      | Check door switch for proper operation, replace if necessary.                                         |
| 7    | Is there voltage at COM of lint panel switch? If yes, continue to next step.                                        | Correct wiring between door switch and lint panel switch.                                             |
| 8    | Is there voltage to NO of lint panel switch? If yes, continue to next step.                                         | Adjust switch as needed.                                                                              |
| 9    | Is there voltage to the input side of the Push-To-Start button? If yes, continue to next step.                      | Correct wiring between start switch and lint panel switch.                                            |
| 10   | Is there voltage at output of push-to-start switch? If yes, continue to next step.                                  | Replace switch.                                                                                       |
| 11   | Is there voltage to the input side of the auxiliary contacts on the motor contactor? If yes, continue to next step. | Correct wiring between motor contactor and lint panel switch.                                         |
| 12   | Is there voltage across the coil of the motor control contactor?                                                    | Correct wiring between motor contactor and Push-To-Start button.                                      |
| 13   | If the start button is released, does the motor contactor stay in the made position? If yes, continue to next step. | Check for proper operation of motor contactor and fan motor centrifugal switch, replace if necessary. |
| 14   | Is there voltage to motor contactor? If yes, continue to next step.                                                 | Correct wiring between motor contactor and supply.                                                    |
| 15   | Is there voltage out of the motor contactor? If yes, continue to next step.                                         | Check for proper operation. Replace motor contactor if necessary.                                     |
| 16   | Is there voltage to the motor? If yes, continue to next step.                                                       | Correct wiring between motor contactor and motor.                                                     |
| 17   | Is the internal wiring of the motor correct for the supply voltage?                                                 | Change the wiring accordingly.                                                                        |
| 18   | Thermal overload cycled, allow motor to cool and recheck.                                                           | Replace motor.                                                                                        |
| 19   | Unit operational.                                                                                                   |                                                                                                       |



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 28. CD MODELS: NO HEAT WITH VEND SATISFIED AND UNIT RUNNING

**NOTE:** All voltage checks are referenced to neutral unless stated otherwise.

| Step | Problem                                                                                                        | If No, then                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Is there voltage to the output of the motor switch?<br>If yes, continue to next step.                          | Replace motor.                                                                                                                                                                                        |
| 2    | Is there voltage to the input of the cabinet limit?<br>If yes, continue to next step.                          | Correct wiring between cabinet limit and motor switch.                                                                                                                                                |
| 3    | Is there voltage to the output of the cabinet limit?<br>If yes, continue to next step.                         | Check for proper operation, replace if necessary.                                                                                                                                                     |
| 4    | Is there voltage to the COM terminal of the airflow switch?<br>If yes, continue to next step.                  | Correct wiring between airflow switch and cabinet limit.                                                                                                                                              |
| 5    | Is there voltage to the N.O. terminal of the airflow switch?<br>If yes, continue to next step.                 | Check for proper airflow and function of the airflow switch. Replace airflow switch if necessary.                                                                                                     |
| 6    | Is there voltage to the input of the stove limit?<br>If yes, continue to next step.                            | Correct wiring between stove limit and airflow switch.                                                                                                                                                |
| 7    | Is there voltage to the output of the stove limit?<br>If yes, continue to next step.                           | Check for blockage and proper airflow. Replace stove limit if necessary.                                                                                                                              |
| 8    | Is there voltage to the COM terminal of switch B?<br>If yes, continue to next step.                            | Correct wiring between switch B and stove limit.                                                                                                                                                      |
| 9    | Is there voltage to the N.C. terminal of switch B?<br>If yes, continue to next step.                           | Check for proper operation, replace switch B if necessary.                                                                                                                                            |
| 10   | Is there voltage to temperature control board? If yes, continue to next step.                                  | Check for voltage at thermistor, or correct wiring between thermostat and switch B.                                                                                                                   |
| 11   | Is there voltage to temperature control board? If yes, continue to next step.                                  | Disconnect thermistor wires and check resistance across terminals. Should read approximately 50,000 Ohms at 77°F. Resistance should decrease with a temperature increase. Replace board if necessary. |
| 12   | Is there voltage to the output? If yes, continue to next step.                                                 | Correct wiring between IEI board and temperature control board.                                                                                                                                       |
| 13   | Does the igniter spark? If yes, continue to next step.                                                         | Check for proper igniter gaps and resistance for high voltage lead.                                                                                                                                   |
| 14   | Is there voltage across V1 and V3 of the IEI board?<br>If yes, continue to next step.                          | Replace IEI board.                                                                                                                                                                                    |
| 15   | Is there voltage across the coils of the gas valve?<br>If yes, continue to next step.                          | Correct wiring between gas valve and IEI board.                                                                                                                                                       |
| 16   | Is there a flame? If yes, unit is operational.                                                                 | Continue to next step.                                                                                                                                                                                |
| 17   | Is there gas pressure on the output side of the gas valve?<br>If yes, continue to next step.                   | Replace gas valve.                                                                                                                                                                                    |
| 18   | Check for proper gas pressure. 3.5 water column inches for Natural Gas, 10.5 water column inches for L.P. Gas. |                                                                                                                                                                                                       |

† Proper gaps for igniter: 5/16 above burner and 5/32 between electrode and grounding tab. The proper resistance of the high voltage lead is between 5,000 Ohms and 25,000 Ohms.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 29. CD MODELS: NO START WITH VEND SATISFIED AND START BUTTON PUSHED 240 Volt/60 Hertz/1 Phase Gas Nonreversing

**NOTE:** All voltage checks are referenced to neutral unless stated otherwise.

| Step | Problem                                                                                                                   | If No, then                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 1    | Is there voltage to the NC terminal of switch A?<br>If yes, continue to next step.                                        | Correct wiring between L1 on TBI and switch A.                           |
| 2    | Is there voltage to COM terminal of switch A?<br>If yes, continue to next step.                                           | Check for proper operation of switch A. Replace switch A if necessary.   |
| 3    | Is there voltage to H1-2 on time delay board? If yes, continue to next step.                                              | Correct wiring between switch A and H1-2 at time delay board.            |
| 4    | Is there voltage to H1-3 on time delay board? If yes, continue to next step.                                              | Replace time delay board.                                                |
| 5    | Is there voltage to COM terminal of the door switch?<br>If yes, continue to next step.                                    | Correct wiring between door switch and switch A of the rotary coin drop. |
| 6    | With the door closed, is there voltage to the N.O. terminal of the door switch? If yes, continue to next step.            | Check door switch for proper operation, replace if necessary.            |
| 7    | Is there power at COM of lint panel switch? If yes, continue to next step.                                                | Correct wiring between door switch and lint panel switch.                |
| 8    | Is there power at NO of lint panel switch?                                                                                | Adjust switch as needed.                                                 |
| 9    | Is there voltage to the input side of the start switch?<br>If yes, continue to next step.                                 | Correct wiring between start switch and lint panel switch.               |
| 10   | With the start button pressed in, is there voltage to the output side of the start button? If yes, continue to next step. | Replace start switch.                                                    |
| 11   | Is there voltage to terminal 1 of the control relay?<br>If yes, continue to next step.                                    | Correct wiring to terminal 1 of the control relay.                       |
| 12   | Is there voltage to coil of the motor relay? If yes, continue to next step.                                               | Check for proper operation. Replace relay if necessary.                  |
| 13   | Is there live power to motor relay input? If yes, continue to next step.                                                  | Correct wiring between input terminal block and relay.                   |
| 14   | Is there live power out of motor relay? If yes, continue to next step.                                                    | Replace contactor.                                                       |
| 15   | Is there voltage to terminal 1 of the motor? If yes, continue to next step.                                               | Correct wiring between motor and start switch.                           |
| 16   | Does the motor run? If yes, continue to next step.                                                                        | Replace the motor.                                                       |
| 17   | Unit operational.                                                                                                         |                                                                          |

**NOTE:** If the motor only runs with the start switch pressed in, that means the centrifugal switch in the motor is bad. Replace the motor.

# Section 4

## Grounding



### WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002



### WARNING

To reduce the risk of fire and electric shock, check with a qualified serviceperson for proper grounding procedures. Improper connection of the equipment grounding conductor may result in a risk of electric shock.

W068R1



### WARNING

To reduce the risk of fire and electric shock, if electrical supply is coming from a three phase service, **DO NOT** connect a “High Leg” or “Stinger Leg” to a single phase machine. On a three phase machine, if there is a “High Leg” or “Stinger Leg” it should be connected to L3.

W069

## Grounding Instructions

Tumbler must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electric shock by providing the path of least resistance for electric current. Tumbler must be connected to a grounded metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the appropriate ground location.

**NOTE:** To ensure protection against shock, this tumbler **MUST** be electrically grounded in accordance with local codes, or in the absence of local codes, with the latest edition of the National Electrical Code ANSI/NFPA No. 70. In Canada the electrical connections are to be made in accordance with CSA C22.1 or the latest edition of the Canadian Electrical Code, Part I and/or local codes. Electrical work should be done by a qualified electrician.



### WARNING

All electrical connections should be made by a qualified electrician.

To reduce the risk of electrical shock, de-energize the electrical circuit being connected to the tumbler before making any electrical connections. Never attempt to connect a live circuit.

W070



# Section 5

## Service Procedures



### WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

**IMPORTANT:** References made to the left or right hand direction are taken from the operator's position facing the front of the tumbler.

#### 30. CONTROLS

- a. Unlock and remove control panel.
- b. Remove two screws holding control assembly to tumbler. Pivot control to left, disconnect wire harness plugs and remove control assembly.

**IMPORTANT:** When handling electronic controls, use a ground wrist strap. Due to the sensitivity of electronic controls, careful handling is required. Wrist strap, cord and alligator clip are designed to carry away any electrostatic charge from your body and to direct charge to an available ground. By using this static protection device, potential electrostatic discharge problems associated with handling of electronic control will be minimized. Always handle electronic control by its metal edges. If a wrist strap is not available, touch tumbler while it is plugged in before handling control to dissipate any charge.

#### 31. PUSH-TO-START SWITCH

- a. Remove control.
- b. Disconnect wires from switch terminals and compress locking tabs to remove switch.

**NOTE:** Refer to wiring diagram when rewiring switch.

#### 32. COOLING, DRYING, OR RUN LIGHT

- a. Remove control.
- b. Disconnect light wire leads.

**NOTE:** On Coin Meter Models, the run light white lead must be joined to the wire harness white lead using a double spade connector. Remove the single spade lug from the replacement run light white wire.

- c. Compress locking tabs on sides of light and push light out through front of control.

**NOTE:** Refer to wiring diagram when rewiring light.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 33. COIN METER

Refer to *Figure 1*.

- a. Remove control panel and control assembly.
- b. Disconnect wires from heat and run switches.
- c. Cut remaining motor wire and joining white wire at wire nut.
- d. Remove four speed nuts holding coin meter to coin meter frame.

**NOTE:** Refer to wiring diagram when rewiring coin meter. Connect wires cut in step “c” above with new wire nut.

### 34. COIN METER TIMER MOTOR

Refer to *Figure 1*.

- a. Remove controls.
- b. Remove two screws holding motor to mounting bracket.
- c. Hold cam and drive fork against inside face of motor mounting bracket and pull motor free of cam and drive fork.
- d. Disconnect motor leads.
- e. Slide cam and drive fork out from under motor mounting bracket.

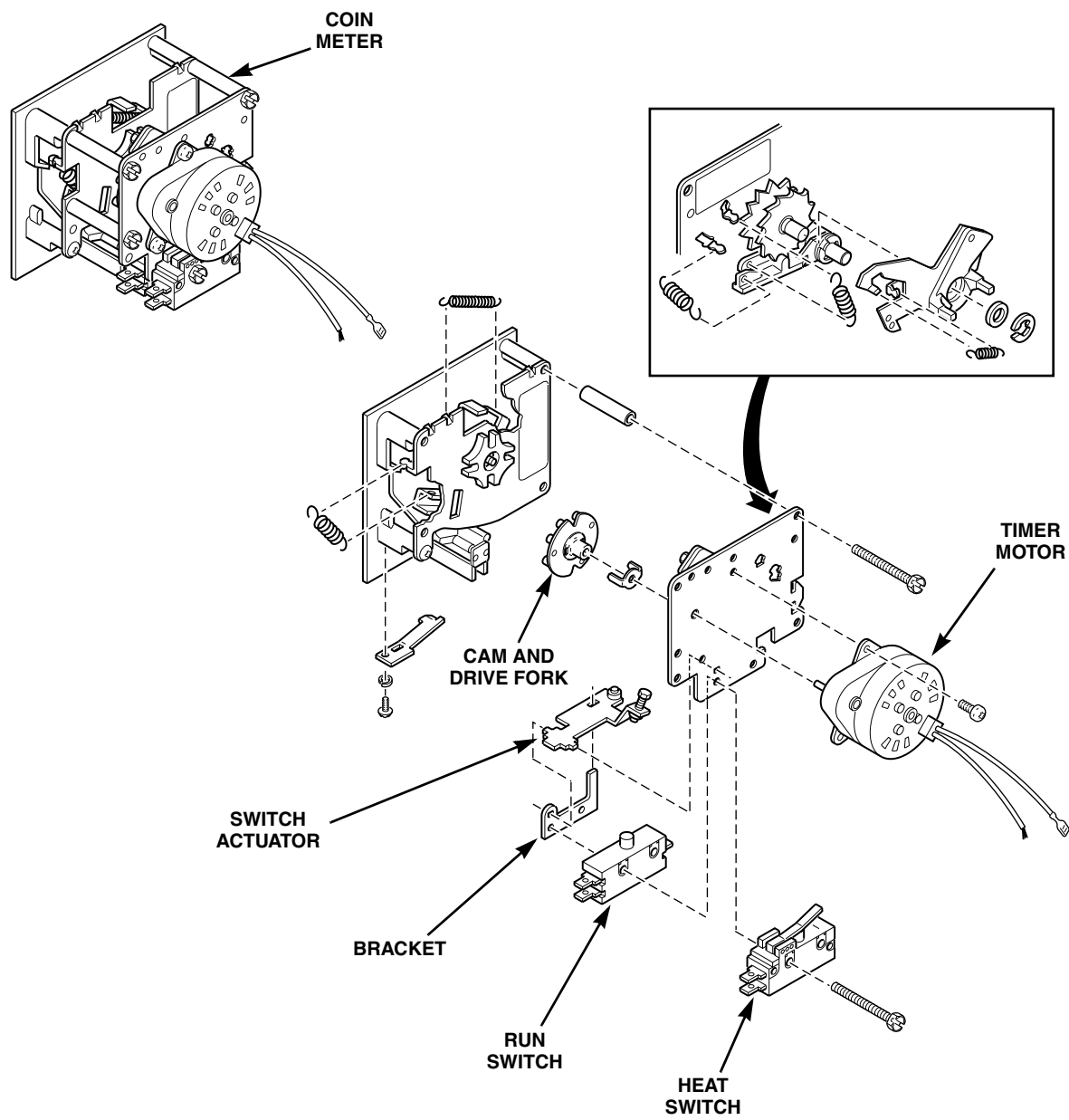
**NOTE:** Refer to wiring diagram when rewiring timer motor.

### 35. COIN METER RUN OR HEAT SWITCH

Refer to *Figure 1*.

- a. Remove controls.
- b. Disconnect wires from switches on timer.
- c. Hold switches and actuating bracket under switches tightly together with one hand while removing two screws holding switches to timing motor mounting bracket. Carefully remove the switches and actuating bracket parts.
- d. Assemble the two switches and the two parts making up the switch actuating bracket.
- e. Actuate the switches a number of times by manually pressing the actuating plate against the switch lever and plunger to ensure that the actuating parts do not bind. If binding occurs, reposition the actuating plate slightly until the binding stops.

**NOTE:** Refer to wiring diagram when rewiring switches.



TMB1749S

Figure 1



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 36. IGNITER

- a. Remove control panel.
- b. Disconnect high voltage lead from igniter.
- c. Remove two screws attaching igniter bracket to stove assembly.

### 37. IGNITION CONTROL

Refer to *Figure 2*.

- a. Remove control panel.
- b. Disconnect wire harness.
- c. Remove high voltage lead.

**IMPORTANT:** Place unit in clean, dry area away from work area to avoid damage. Do not attempt field repair of the ignition control unit. Attempted repair or tampering with the ignition control unit will void its warranty.

- d. Remove two screws attaching ignition control unit to cabinet frame.
- e. Remove ignition control.

### 38. GAS VALVE

Refer to *Figure 2*.

- a. Remove control panel.
- b. Close gas shut-off valve.
- c. Disconnect all wires from gas valve terminals and disconnect gas valve pipe unions.
- d. Remove screws holding gas valve bracket to stove.
- e. Remove spudholder and manifold from left side of valve and plug from right side of valve.
- f. Remove gas valve from mounting bracket.

**IMPORTANT:** Purge air in the gas service line by operating the tumbler in drying mode. Use pipe compound resistant to action of Liquid Petroleum (L.P.) Gas on all pipe threads.

### 39. BURNER TUBE

Refer to *Figure 2*.

- a. Remove control panel.
- b. Close gas shut-off valve.
- c. Disconnect union nut attaching nipple to spudholder and remove spudholder.
- d. Remove screws holding gas valve bracket to stove assembly.
- e. Remove screws holding burner tubes to stove frame and remove burner tubes.



## WARNING

To reduce risk of fire or explosion, check pipe connections for gas leaks with a non-corrosive leak detection fluid. Do not use an open flame to check for gas leaks!

W310

**IMPORTANT:** Make sure that spudholder and orifices are positioned such that gas will be injected directly down the center of the burners.

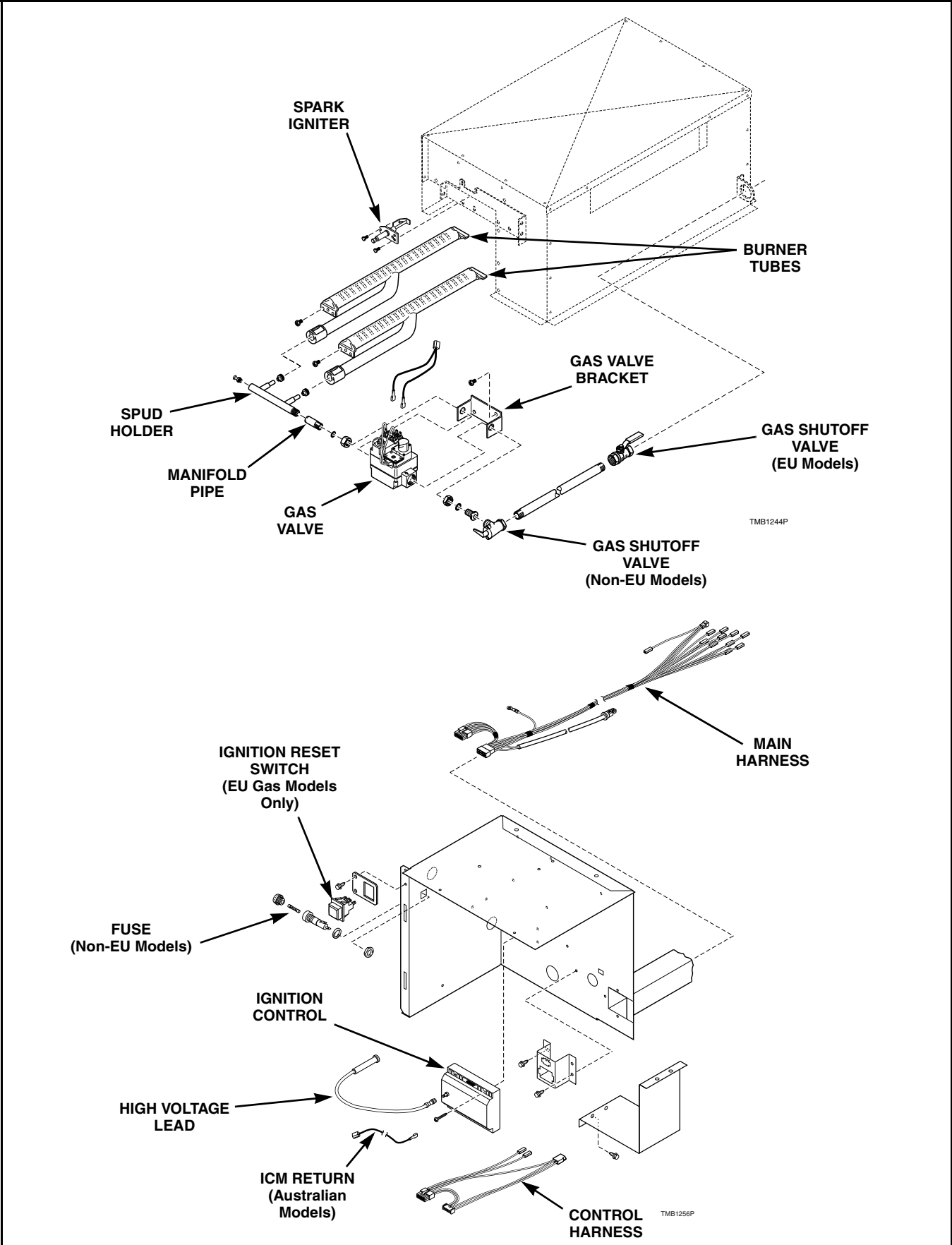


Figure 2



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 40. CONTACTORS AND TERMINAL BLOCK (Electric Models)

**NOTE:** Contactors and terminal blocks are located in contactor box at the rear of the tumbler.

- a. Remove screw holding cover to contactor box and remove cover.
- b. Remove wires from contactor terminals and terminal blocks.

**NOTE:** Refer to wiring diagram when rewiring contactors or terminal blocks.

- c. Remove screws holding contactor to box.
- d. Remove two screws holding terminal block to box.

**NOTE:** Use a 3 pole terminal block.

### 41. HEATER ELEMENT (Electric Models)

Refer to *Figure 3*.

- a. Remove two screws holding hood to top of cabinet and lift hood assembly off heater housing.
- b. Remove nuts, wires and jumper bars from element terminals.
- c. Remove four screws holding heater housing to top of cabinet and remove heater from tumbler.
- d. Turn heater housing upside down and remove bottom guard retaining screws.
- e. Remove two retaining screws from each of the elements to be replaced.

**NOTE:** To remove top element, all elements must be removed. To remove center element, both center and bottom element must be removed.

- f. Slide element forward until terminals clear rear of heater housing.
- g. Tilt element up and gently slide it out of housing.

**IMPORTANT:** Bottom guard must be put back on bottom of housing before reinstalling heater on tumbler.

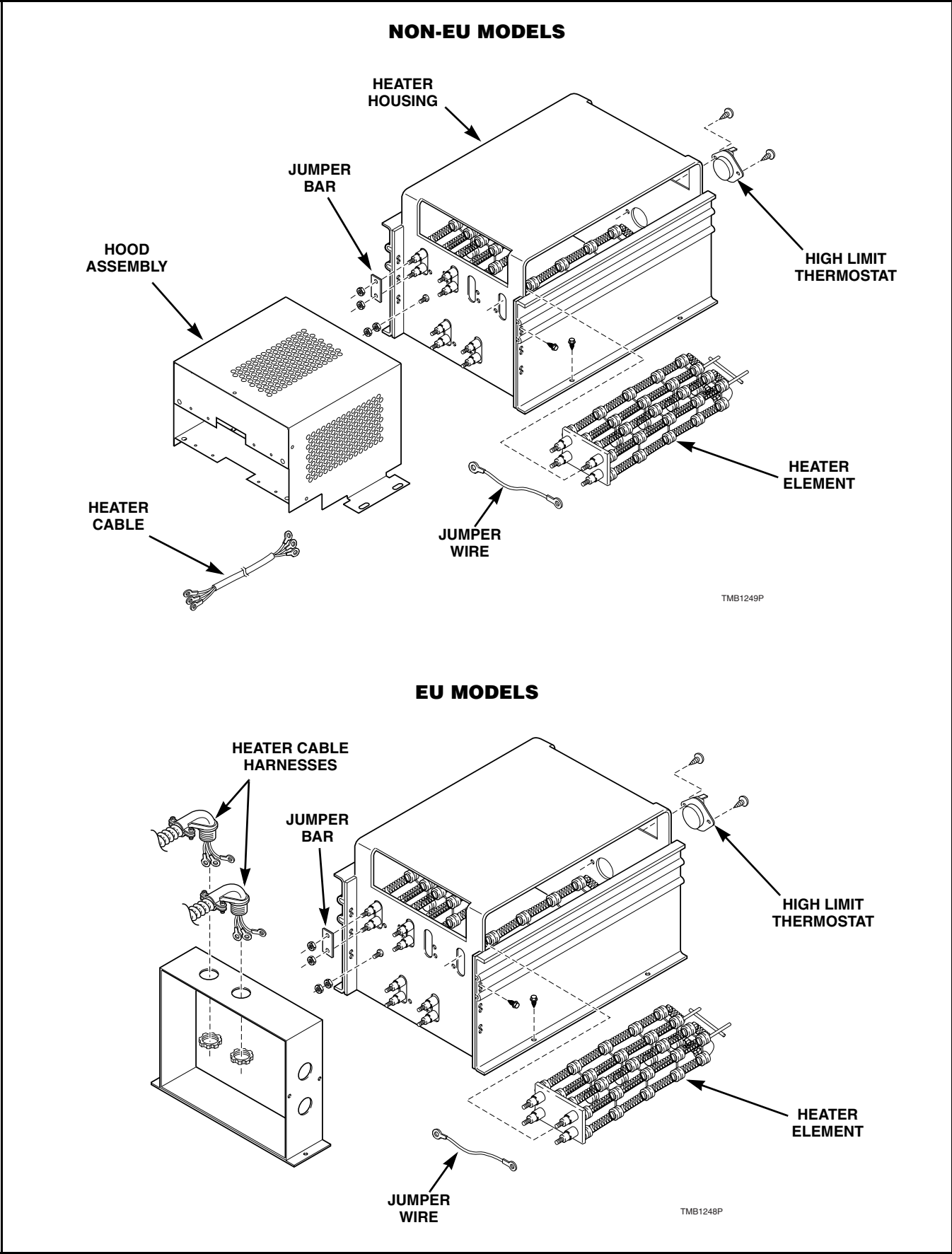


Figure 3



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 42. STOVE HIGH LIMIT THERMOSTAT (Gas Models)

- Remove two screws holding thermostat and bracket to rear side of stove. Refer to *Figure 4*.
- Remove two screws holding cover to mounting bracket. Refer to *Figure 5*.
- Disconnect wires from thermostat.
- Remove two screws holding thermostat to mounting bracket. Refer to *Figure 5*.

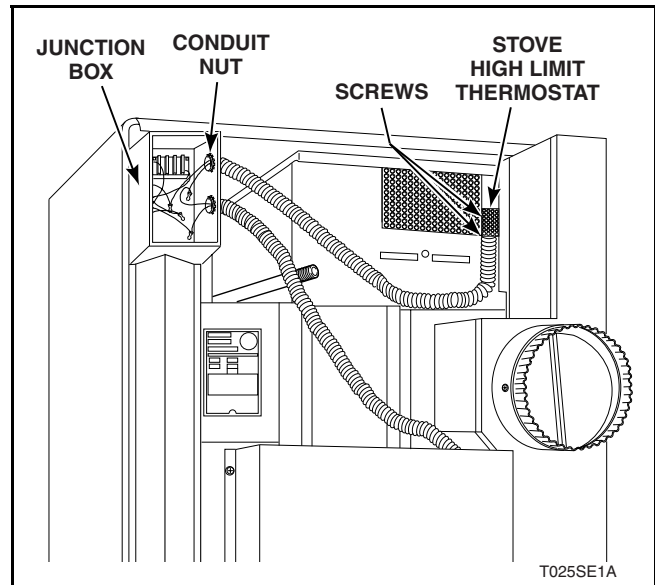


Figure 4

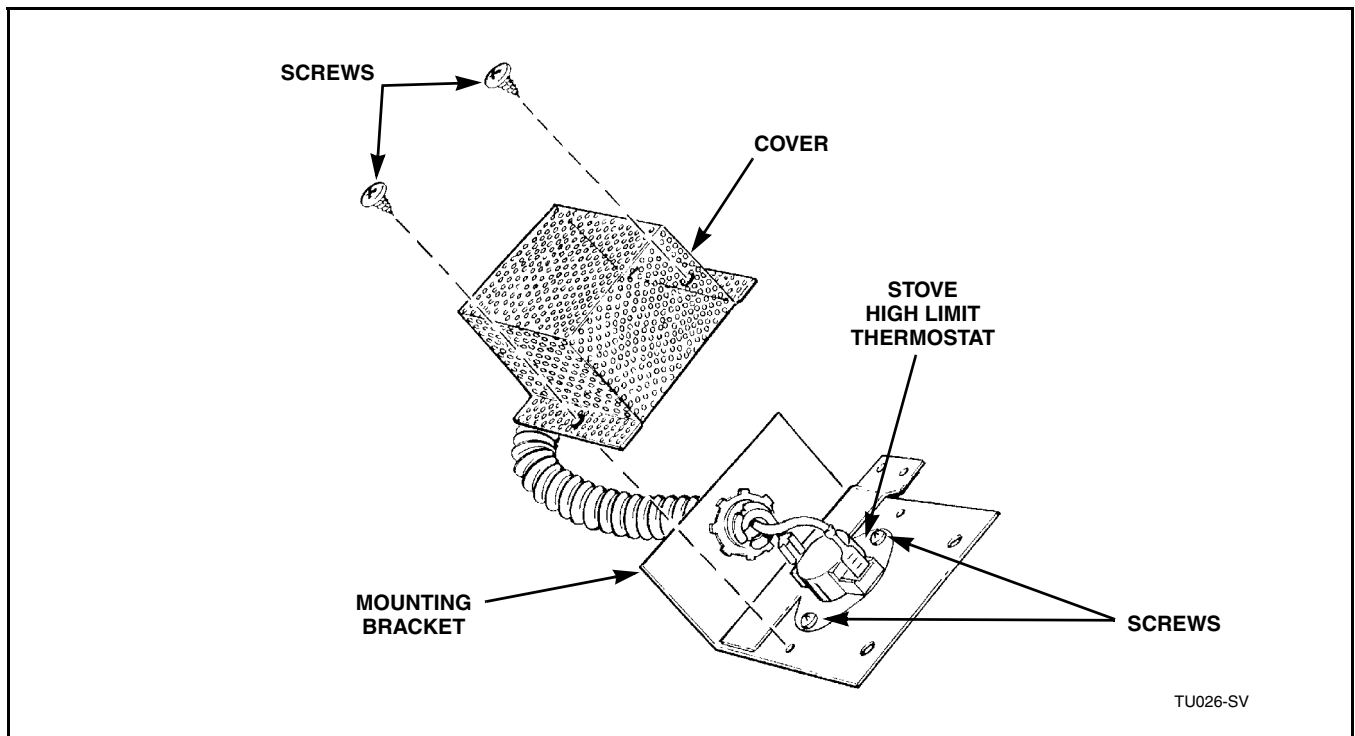


Figure 5





## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 43. CABINET HIGH LIMIT THERMOSTAT

Refer to *Figure 6*.

- a. Disconnect electrical service to tumbler.
- b. Remove lint compartment door.
- c. Remove two screws holding thermostat mounting bracket to cylinder shroud.
- d. Remove two screws holding cover to mounting bracket.
- e. Disconnect two wires from thermostat.
- f. Remove two screws holding thermostat to mounting bracket.

- g. To remove thermostat wire assembly.

- (1) Pull wires through bushing in thermostat mounting bracket and then push wire out through hole in back of lint compartment.
- (2) Remove junction box cover from rear of tumbler.
- (3) Disconnect wires from inside of junction box and pull wires from junction box.

**NOTE:** Refer to wiring diagram when reconnecting thermostat wires.

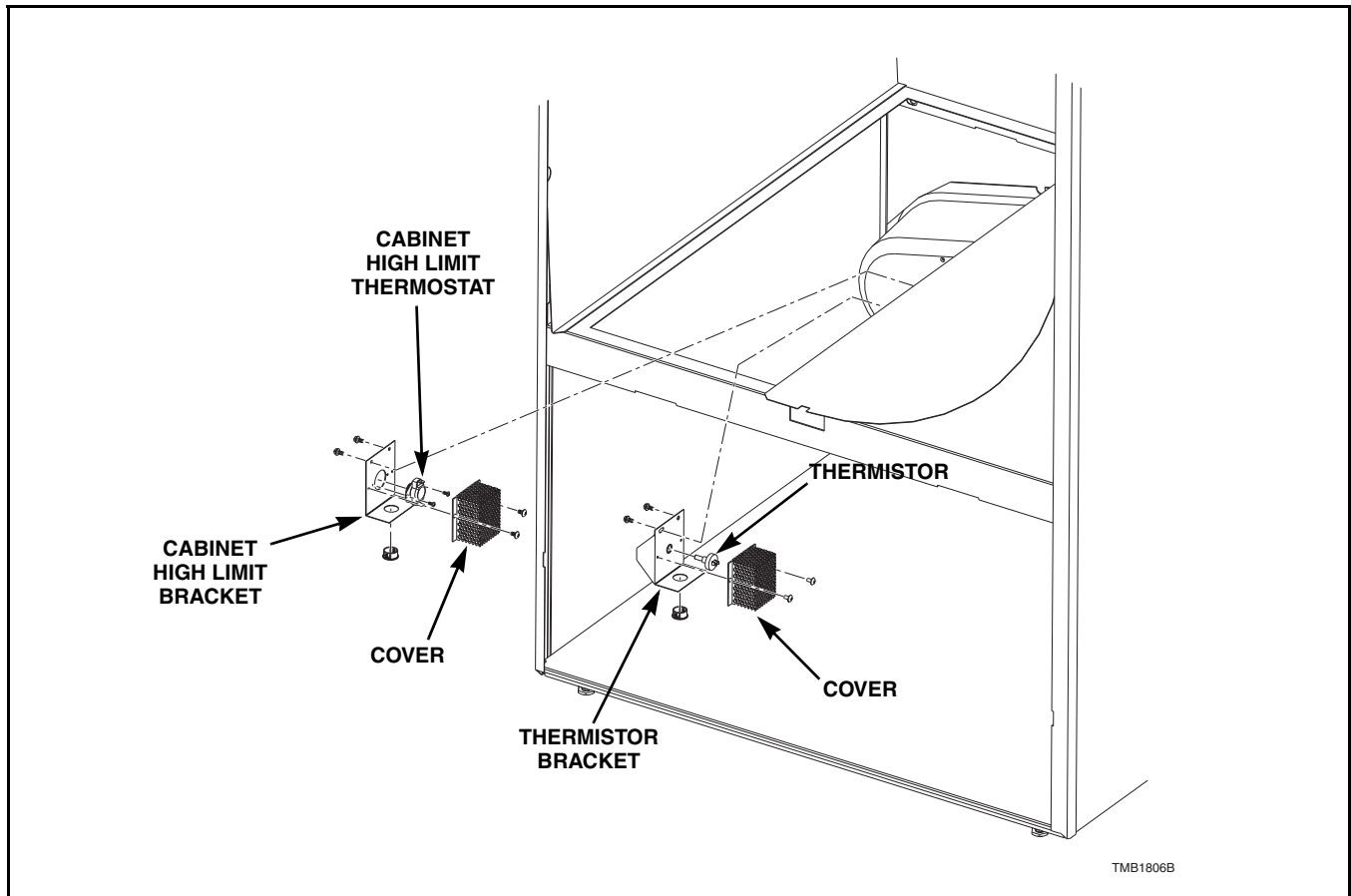


Figure 6



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 44. HIGH LIMIT THERMOSTAT (Electric Models)

- a. Unlock and open control panel.
- b. Disconnect wires from thermostat.
- c. Remove two screws holding thermostat to front of heater and remove thermostat. Refer to *Figure 3*.

**NOTE:** Refer to wiring diagram when rewiring thermostat.

### 45. THERMISTOR Refer to *Figure 6*.

- a. Unlock and remove the lint panel.
- b. Remove two screws holding the perforated cover to the thermistor bracket.
- c. Disconnect the wires from the back of the thermistor.
- d. Unscrew thermistor from bracket.

**NOTE:** Refer to the wiring diagram when reconnecting the wires to the thermistor.

### 46. STEAM COILS



## WARNING

**Allow steam coils and valve to cool down before attempting any service procedures.**

W249

- a. Shut off inlet and outlet valves and disconnect flex hoses from steam coils.
- b. Remove top cover pan.
- c. Remove screws holding cover to top of steam heating unit and remove cover.
- d. Remove screws holding steam coils to coil frame.
- e. Remove steam coils by lifting straight up and out of tumbler.

**IMPORTANT:** When removing or replacing steam coils, be careful not to damage fins on steam coils.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 47. LOADING DOOR ASSEMBLY

Refer to *Figure 7*.

- Open loading door.
- Remove screw from lower hinge cam.
- While supporting lower hinge cam, raise door to clear setscrew located in cam.
- Slide lower cam down and out of hinge lug.
- Lift door assembly up and out of hinge lug.

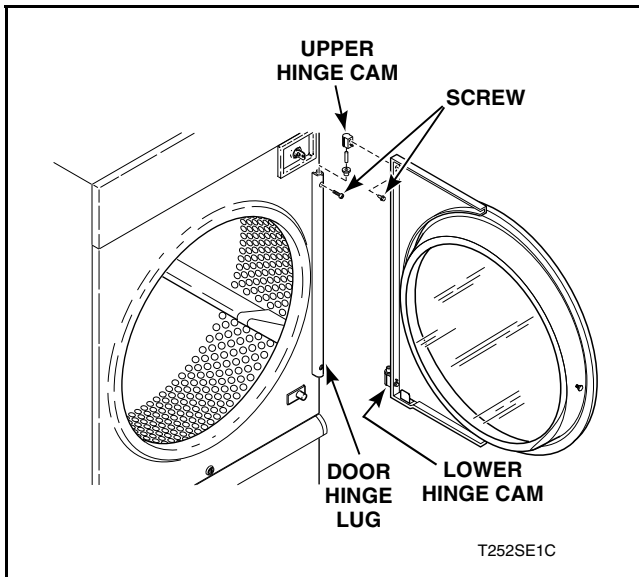


Figure 7

### 48. DOOR HINGE

Refer to *Figures 7 and 8*.

- Remove door assembly.
- Remove nuts and screws holding hinge to door frame.

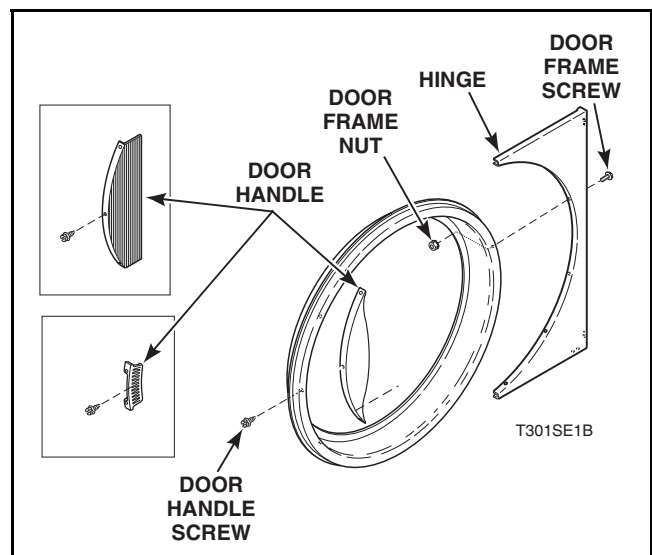


Figure 8

### 49. LOADING DOOR HANDLE

Refer to *Figure 8*.

- Open loading door.
- Remove screws holding door handle to door frame.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 50. FRONT PANEL

- a. Remove control panel.
- b. Unlock, open and remove lint panel. Set aside to prevent damage.
- c. Remove loading door assembly.
- d. Support front panel and remove all screws holding front panel to tumbler cabinet. Refer to *Figure 9*.
- e. Disconnect door switch harness.

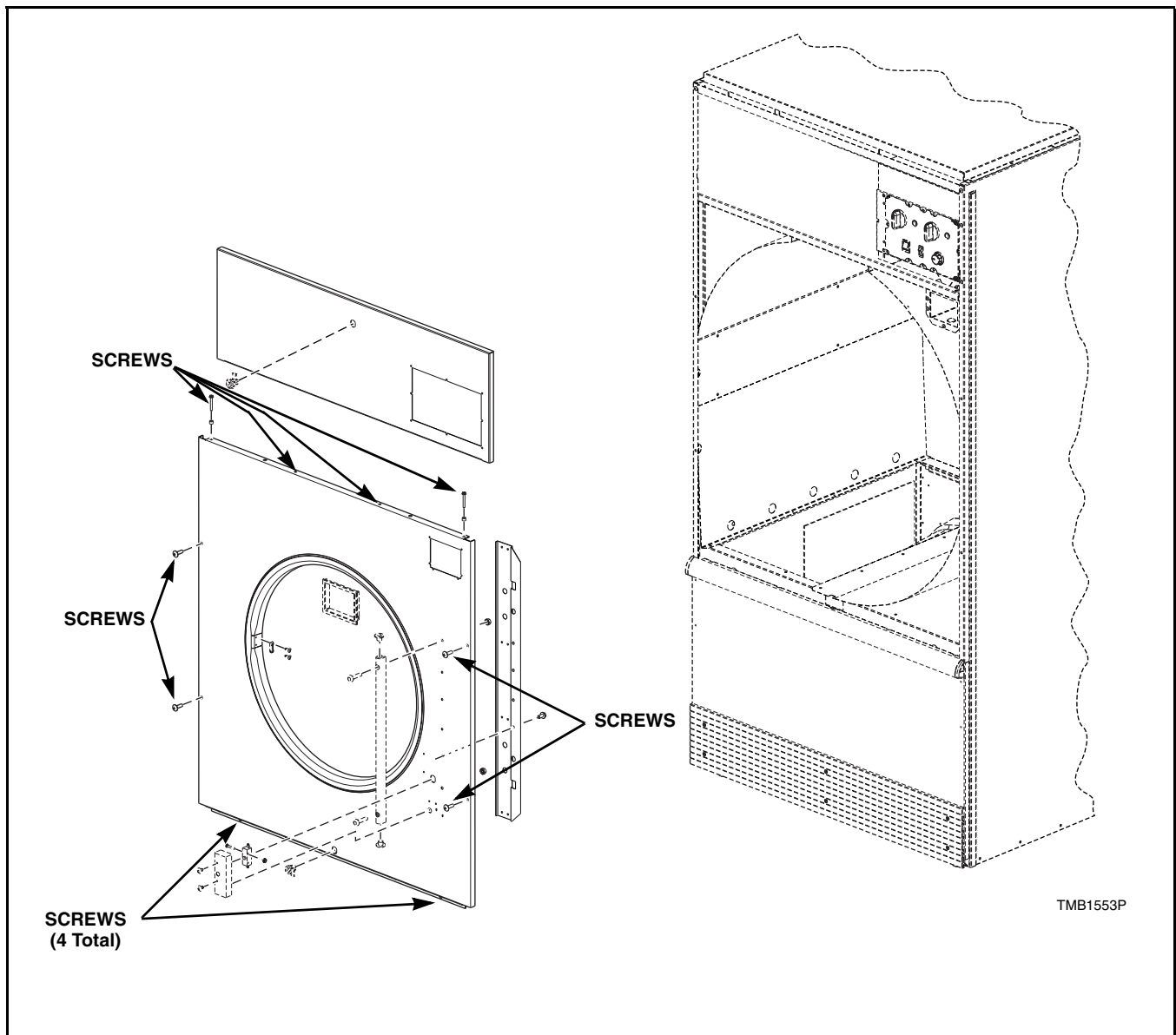


Figure 9



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 51. AIRFLOW SWITCH

**NOTE:** The airflow switch is located on the lower left of the rear panel for electric models, on the rear plate of the stove for gas models.

- a. Remove airflow switch box cover. Refer to *Figure 10*.
- b. Disconnect wires from switch. Refer to *Figure 11*.

**NOTE:** Refer to wiring diagram when rewiring airflow switch.

- c. Remove screw(s) holding switch box to rear of tumbler. Refer to *Figure 11*.
- d. Remove two screws holding switch to mounting bracket.

**NOTE:** After reinstalling airflow switch and mounting bracket into switch box, adjust switch. Refer to *Adjustments* section.

### 52. DRIVE GUARD

Refer to *Figure 10*.

- a. Support drive guard and remove screws holding guard to rear of tumbler.
- b. Reinstall drive guard.

### 53. DRIVE BELT

**Reversing Tumblers**

Refer to *Figure 25*.

- a. Remove drive guard.
- b. Loosen cap screws attaching idler housing to guide rails. Loosen jam nut on adjusting screw above idler and turn adjusting screw out. Raise idler housing and remove cylinder belts.
- c. To remove drive belt after removing cylinder belts:
  - (1) Remove two screws attaching reversing motor belt guard to rear of cabinet and remove guard.
  - (2) Lift idler assembly and run belt off from idler sheave.

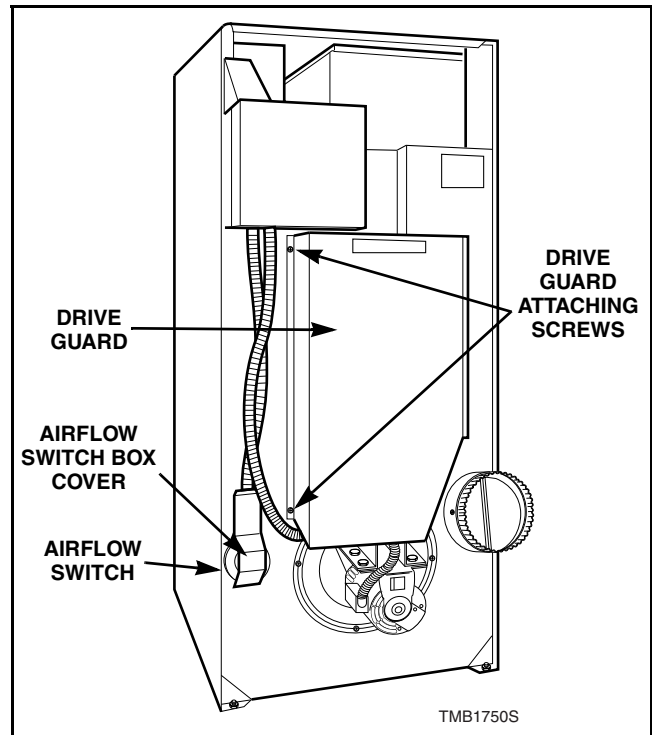


Figure 10

- (3) Remove upper portions of belt from motor pulley, place it between the pulley and cabinet then push belt down below the pulley.
- (4) Feed the belt over the cylinder pulley.
- (5) Remove the lower bolt attaching the idler rails.
- (6) Pivot the bottom of the rails outward and remove belt.

**NOTE:** When reinstalling belts, adjust cylinder belts then adjust drive belt. Refer to *Adjustments* section.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

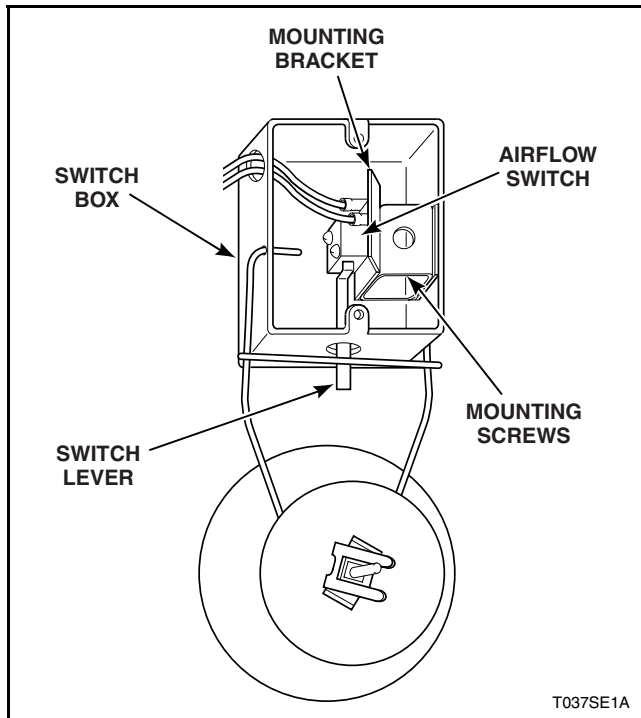


Figure 11

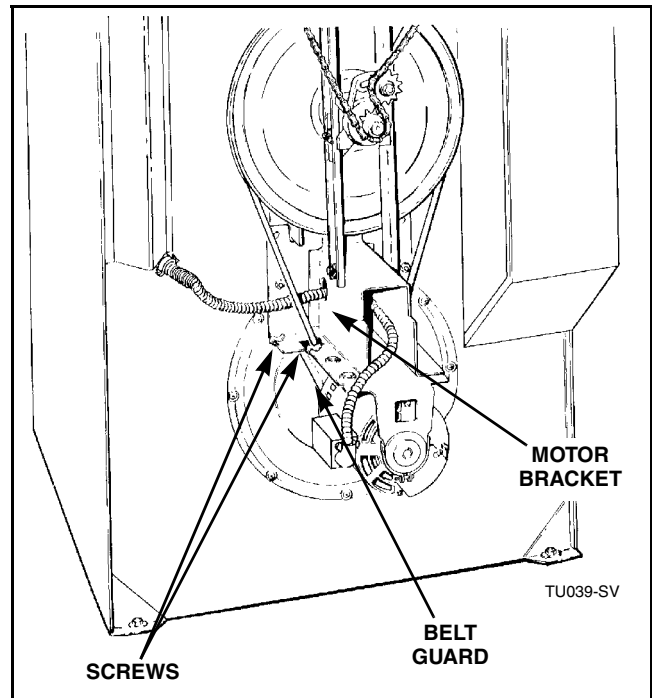


Figure 12

### 54. DRIVE BELT

#### Nonreversing Tumblers

Refer to *Figure 24*.

- Disconnect electrical service to tumbler.
- Remove drive guard. Refer to *Figure 10*.  
Remove two screws holding belt guard assembly to motor bracket. Refer to *Figure 12*.  
Remove belt guard.
- Loosen cap screws on idler housing. Drop idler housing to bottom of slots by loosening jam nut by turning adjustment screw down.
- Remove lower bolt and nut from guide rail.  
Hinge guide rail out and slip belt out from under guide rails.
- Slip new belt under guide rail and onto sheave and motor pulley.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 55. IDLER SHAFT

Refer to *Figure 13*.

- Remove idler housing assembly.
- Remove sheave and drive pulley.
- Remove cap screws holding idler housing to guide rails.
- Support idler housing assembly and carefully drive idler shaft from housing using a hammer and a hardwood dowel.
- Support idler housing assembly and remove bearings from housing using a hammer and a hardwood dowel.

f. Reinstall shaft and bearings.

**IMPORTANT:** When installing new bearings, apply a film of oil to the bearing cavity surfaces of the housing and the outside diameter of the bearings.

**IMPORTANT:** If a press is not available to install bearings, tap bearings into housing using a prylin hammer.

g. Reinstall drive guard.

**NOTE:** After installing sheave, adjust belt.

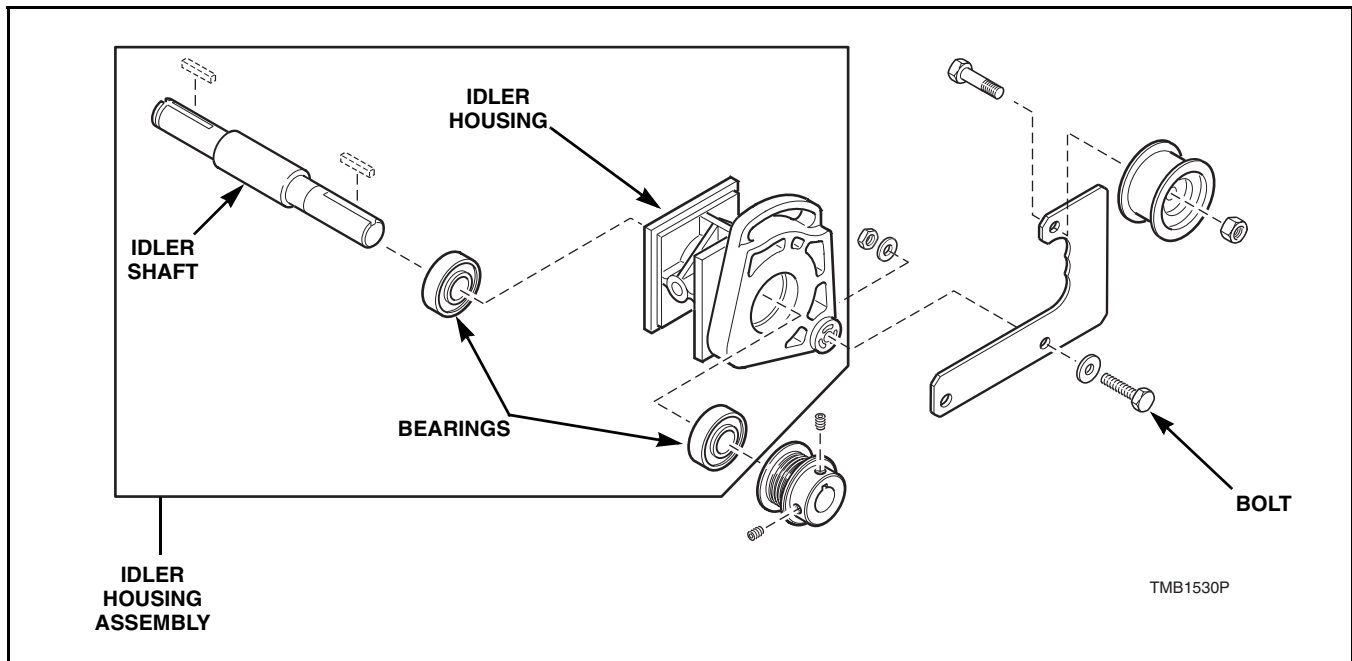


Figure 13



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 56. TRUNNION HOUSING ASSEMBLY

- Remove cylinder assembly.
- Remove upper guide rail bolt and nut.
- Remove four adjusting screws holding trunnion housing assembly to rear of cabinet. Refer to *Figure 14*.
- Remove four bearing retainer screws holding the small bearing in housing. Refer to *Figure 14*.
- Use a hammer and hardwood dowel to remove bearings.

**IMPORTANT:** When installing new bearings, apply a film of oil to the bearing cavity surfaces in the housing and to the outside diameter of the bearings.

**IMPORTANT:** If a press is not available to install bearings, tap bearings into housing.

- Reinstall drive guard on tumbler. Refer to *Figure 10*.

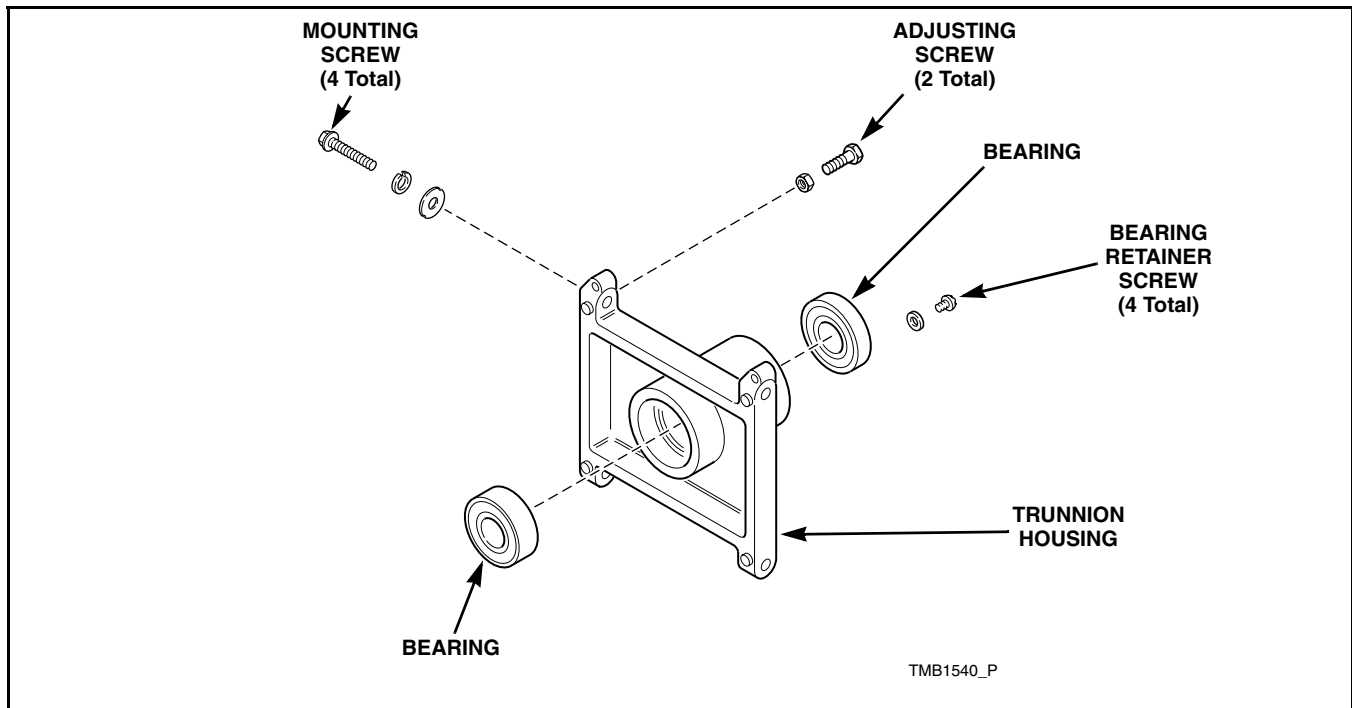


Figure 14





## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 57. TRUNNION SHAFT ASSEMBLY

Refer to *Figure 15*.

- Remove cylinder assembly.
- Remove the four washers and nuts holding trunnion shaft assembly to rear of cylinder.

**IMPORTANT:** When installing trunnion assembly on cylinder, the cylinder and shaft must be aligned. Refer to *Figure 15* for an example of how to check for proper alignment of the shaft and cylinder. Measure the distance between the center of the

trunnion shaft and the outer rim of the cylinder at the four points shown. If any measurement is lower than the highest point, place shim or shims (M401402) between trunnion channel and cylinder back until the measurement is equal to the highest point.

**NOTE:** After installing cylinder and shaft, adjust cylinder clearance. Refer to *Adjustments* section.

- Reinstall drive guard on tumbler.

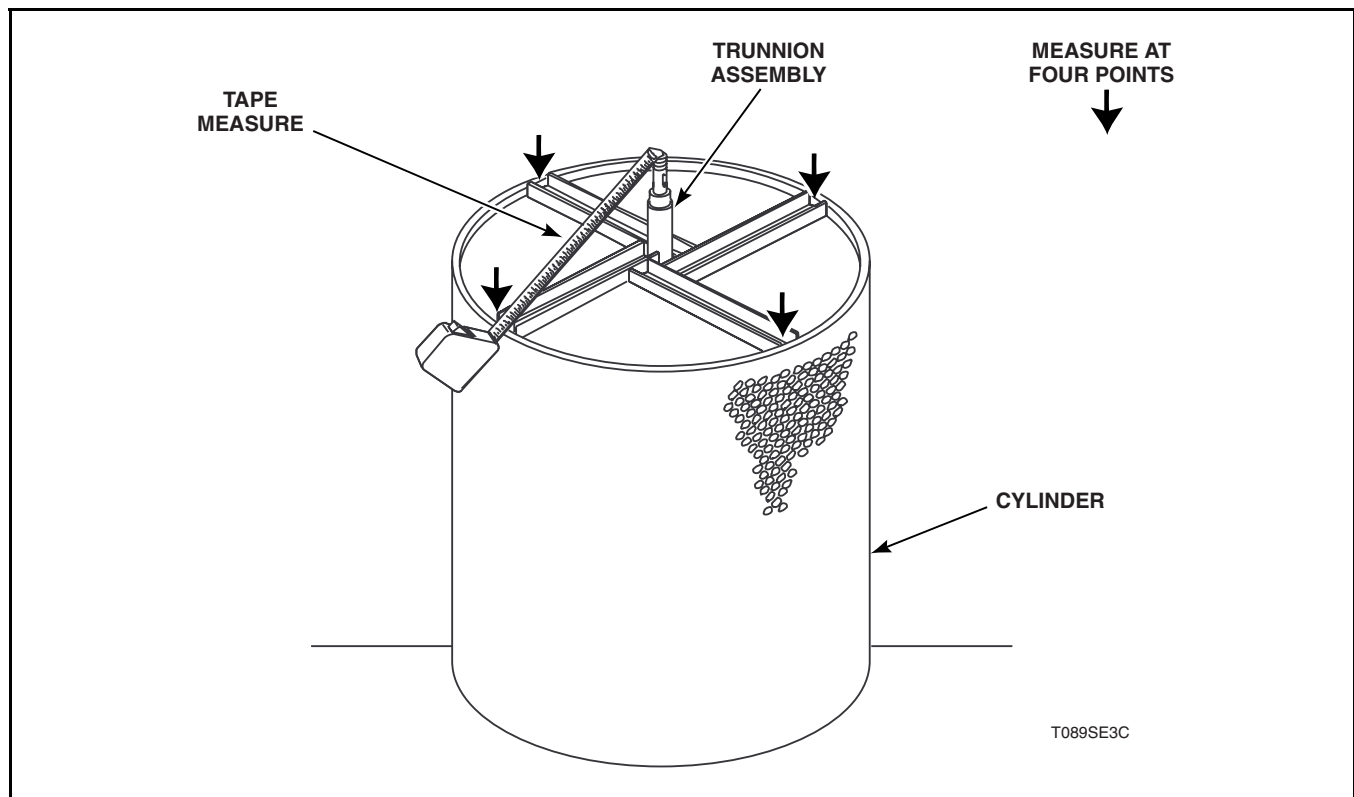


Figure 15



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 58. MOTOR AND FAN ASSEMBLY

#### Nonreversing Models

- Disconnect wires from motor as follows:
  - (1) Remove cover plate from rear of motor.
  - (2) Mark four wires and disconnect them from motor terminals.
  - (3) Loosen clamp screws in box connector.
  - (4) While holding box, turn box connector out of motor.

**NOTE:** Refer to wiring diagram when rewiring motor.

- Remove upper belt.
- Loosen nut on upper guide rail bolt. Refer to *Figure 24*.
- Loosen nut on idler housing attaching bolt and lower idler housing to bottom of slots. This is to put slack in drive belt, so it can be slipped off the motor pulley without risk of damage.
- Remove two screws holding drive guard to motor bracket and remove belt guard. Refer to *Figure 12*.
- Remove nut and washer from lower guide rail bolt. Refer to *Figure 24*.

**NOTE:** After removing belt, replace the lower guide rail bolt. Refer to *Figure 17*.

- Slip drive belt off motor pulley.
- Remove the seven fan housing attaching screws. Refer to *Figure 16*.

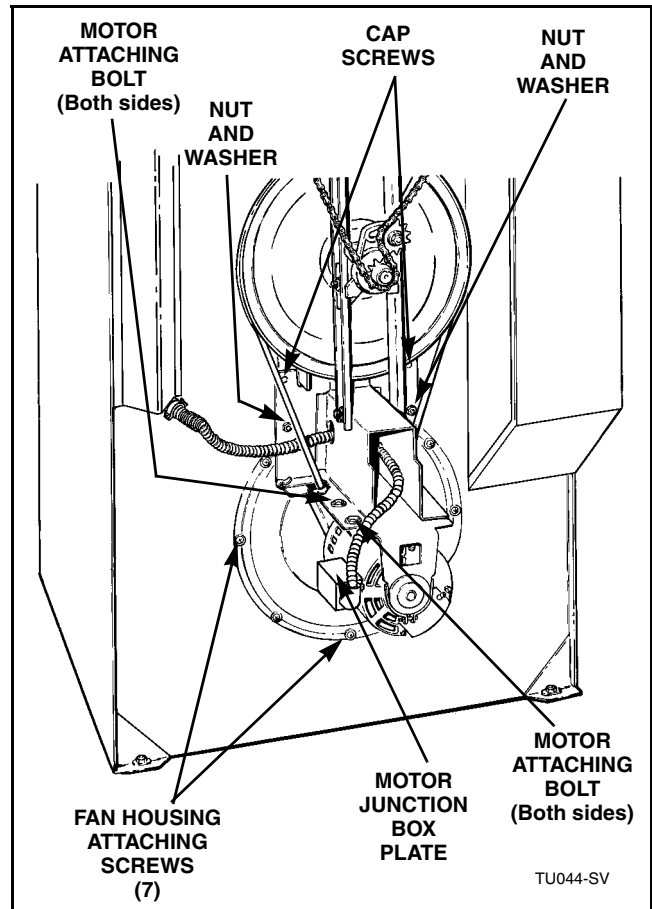


Figure 16

- Remove the two cap screws and two sets of nuts and washers holding motor bracket to rear of tumbler cabinet. Refer to *Figure 16*.
- Using the guide rails as supports, swing motor and fan assembly out and away from rear of tumbler. Refer to *Figure 17*.
- While supporting motor and fan assembly, remove the lower guide rail bolt. Refer to *Figure 24*.
- Remove four sets of nuts, washers and bolts holding mounting bracket to motor. Refer to *Figure 16*.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

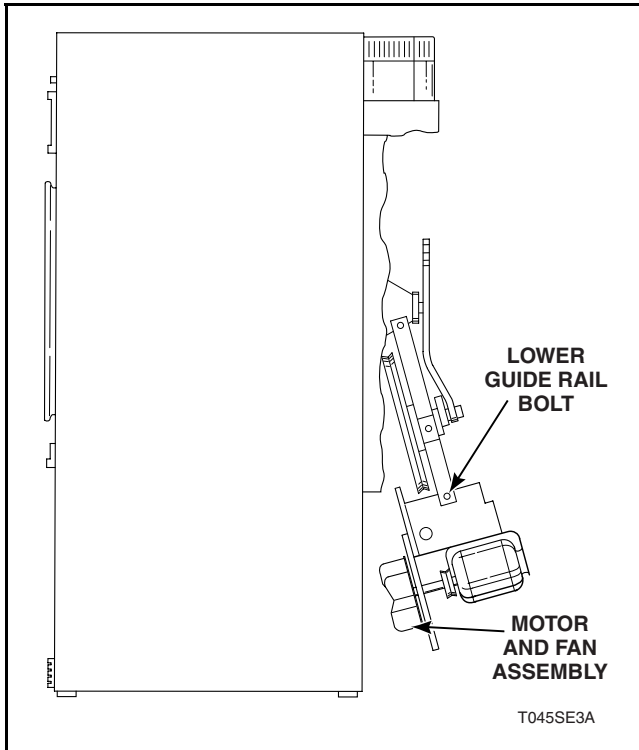


Figure 17

- m. Remove locknut and jam nut holding fan on motor shaft. Refer to *Figure 18*. Pull fan off motor shaft.

**NOTE:** Fan is keyed to motor shaft and may have to be removed using a puller. Look for a spacer washer at the bottom of the fan keyway. Take care to avoid losing or damaging the spacer washer.

- n. Remove spacer washer from motor shaft. Refer to *Figure 18*.  
 o. Loosen two setscrews holding motor pulley to motor shaft. Refer to *Figure 18*. Remove motor pulley.

**NOTE:** A puller may be required to remove pulley from motor shaft.

**NOTE:** After installing motor and fan assembly, adjust belt.



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 59. FAN AND MOTOR ASSEMBLY

#### Reversing Models

- a. Disconnect wires from motor as follows:
  - (1) Remove cover plate from rear of motor.
  - (2) Mark four wires and disconnect them from motor terminals.
  - (3) Loosen clamp screws in box connector.
  - (4) While holding box, turn box connector out of motor.

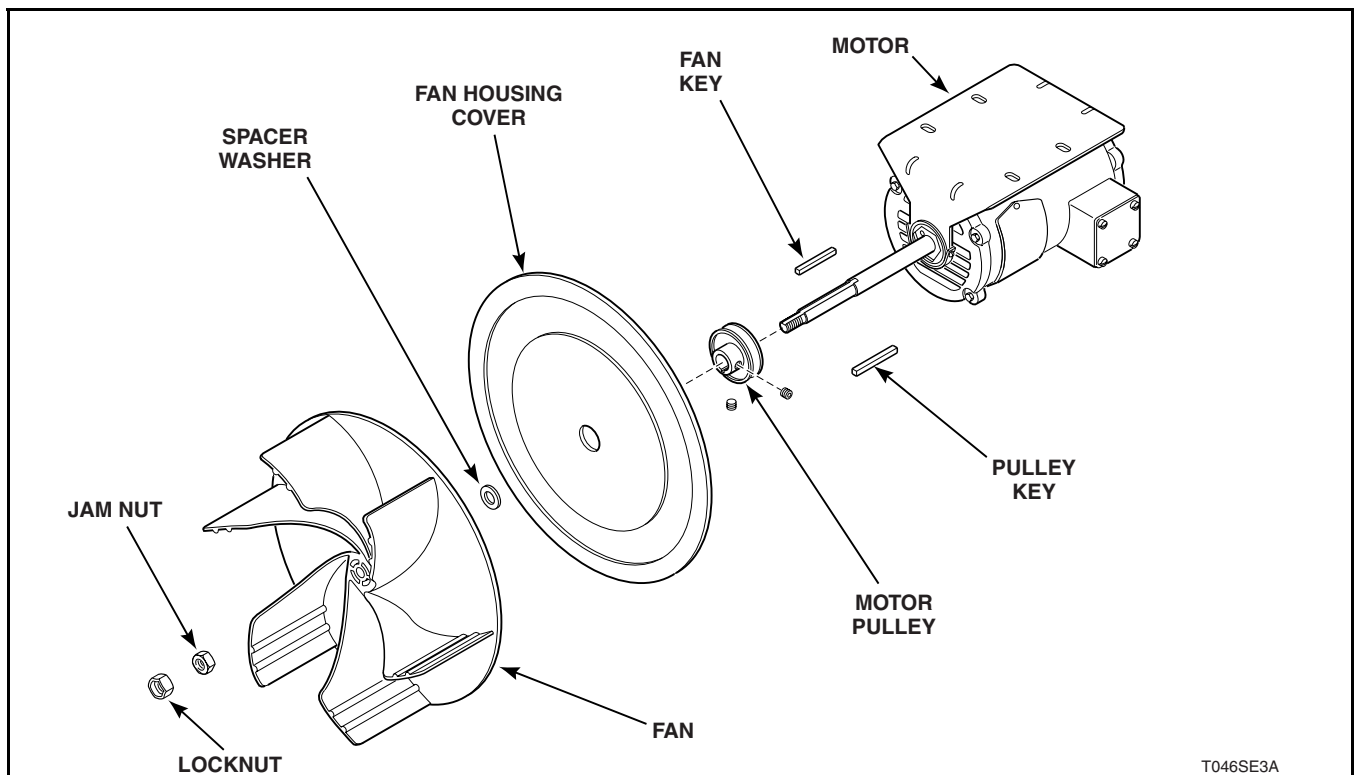
**NOTE: Refer to wiring diagram when rewiring motor.**

- b. Remove nut and washer from lower guide rail bolt. Refer to *Figure 24*.
- c. Remove the seven fan housing cover attaching screws. Refer to *Figure 16*.
- d. Remove the two cap screws and two sets of nuts and washers holding motor bracket to rear of tumbler cabinet. Refer to *Figure 16*.

- e. Using the guide rails as supports, swing motor and fan assembly out and away from rear of tumbler. Refer to *Figure 17*.
- f. While supporting motor and fan assembly, remove the lower guide rail bolt. Refer to *Figure 24*.
- g. Remove four sets of nuts, washers and bolts holding mounting bracket to motor. Refer to *Figure 16*.
- h. Remove locknut and jam nut holding fan on motor shaft. Refer to *Figure 18*. Pull fan off motor shaft.

**NOTE: Fan is keyed to motor shaft and may have to be removed using a puller. Look for a spacer washer at the bottom of the fan keyway. Take care to avoid losing or damaging the spacer washer.**

- i. Remove spacer washer from motor shaft. Refer to *Figure 18*.



T046SE3A

Figure 18



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 60. CYLINDER DRIVE MOTOR

#### Reversing Tumblers

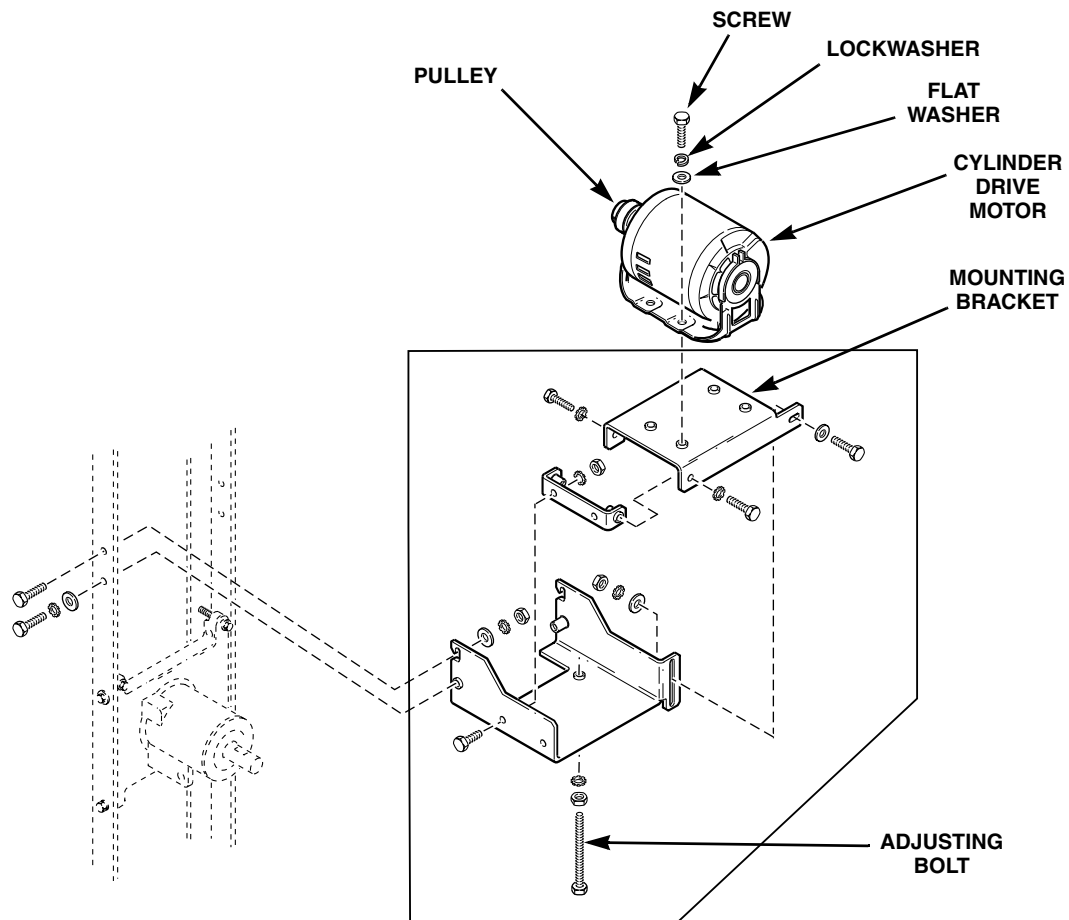
Refer to *Figure 19*.

- Support drive guard and remove the screws holding it to the back panel of the tumbler.
- Loosen locking bolt and back adjusting screw out to loosen belt. Refer to *Figure 25*.
- Slip drive belt off of the motor pulley.
- Disconnect the wire harness from motor.

- Remove the four cap screws, nuts, lockwashers and flat washers holding the motor to the mounting bracket.
- Loosen the setscrews in the motor pulley and remove pulley by using a suitable puller.

**NOTE:** Refer to wiring diagram when rewiring the motor.

- After installing motor, adjust drive belt tension, and adjust motor position on mounting bracket.



TMB1689P

Figure 19

# Section 6

## Adjustments



### WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

#### 61. LEVELING LEGS

Refer to *Figure 20*.

**NOTE:** It is recommended that the front of the tumbler be kept slightly higher than the rear (approximately 1/8 inch, 3.0 mm). This will prevent the clothes, while tumbling, from wearing on the door glass gasket.

- a. Check the front to rear level by rotating the clothes cylinder until one of the cylinder ribs is at the bottom. Place a level on the rib.
- b. Check the side to side level by placing a level on the front and rear of top panel.

**NOTE:** Keep the tumbler as close to the floor as possible. All four legs must rest firmly on the floor so weight of tumbler is evenly distributed. Tumbler must not rock.

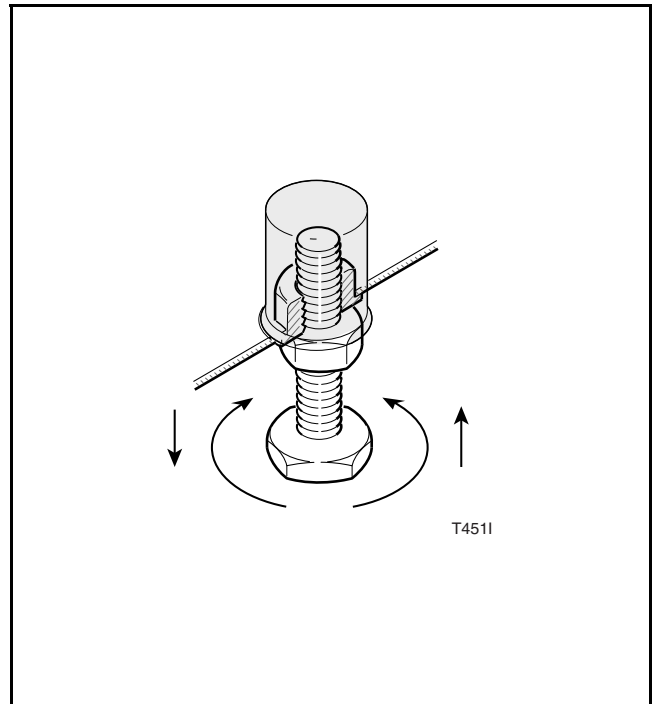


Figure 20



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 62. MAIN GAS BURNER AIR INLET SHUTTERS

(All Gas Models)

Refer to *Figure 21*.



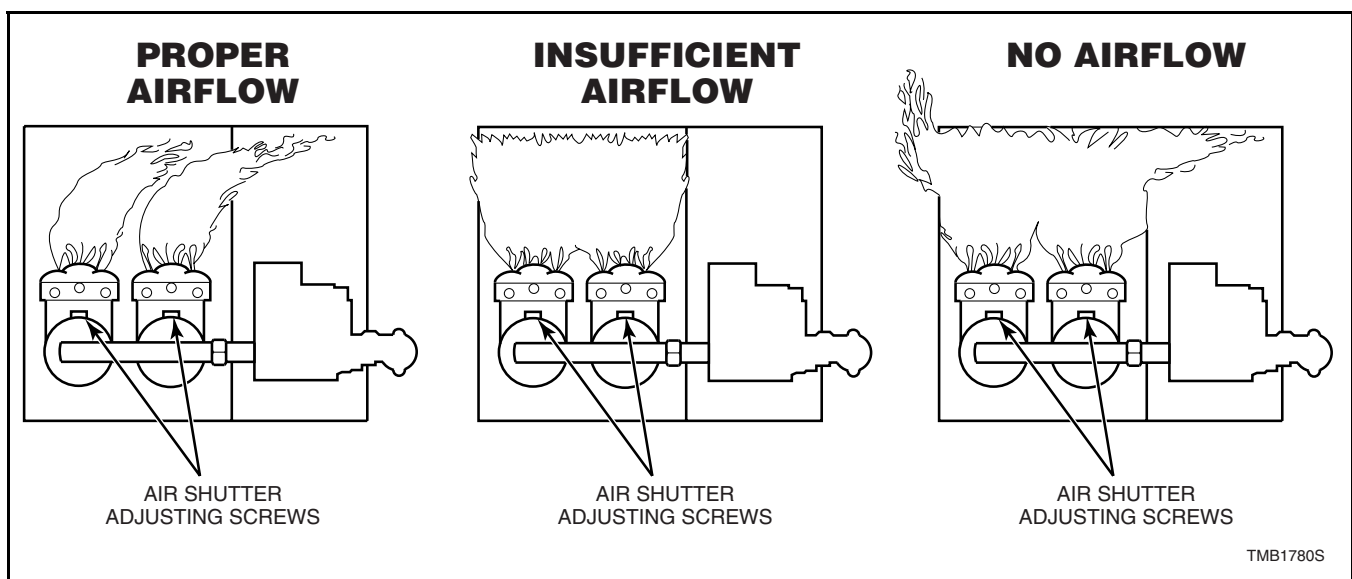
## CAUTION

The air inlet shutters on the burner must be adjusted so sufficient primary air is metered into the system for proper combustion and maximum efficiency. Before adjusting the inlet shutter be sure that all lint is removed from lint compartment and lint screen.

W281

Air inlet shutter adjustments will vary from location to location and will depend on the vent system, number of units installed, make-up air and line gas pressure. Opening the shutter increases the amount of air supplied to the burner while closing the shutter decreases the air supply. Adjust air shutter as follows:

- Unlock and remove the access door.
- Start the tumbler and check the flame pattern. Correct air and gas mixture is indicated if the flame pattern is primarily blue, with small yellow tips, and bends to the right of the heater section. Too little air is indicated if the flame is yellow, lazy and smoky.
- To adjust the air inlet shutter, loosen adjusting screws.
- Push or pull shutters in or out as necessary to obtain desired flame intensity.
- After shutter is adjusted, tighten locking screw securely.
- If the shutter is correctly adjusted, but the flame pattern is straight up, insufficient air is flowing through the tumbler and **airflow switch is improperly set**. A flame pattern that flares to the right and left indicates that no air is flowing through the tumbler. Adjust airflow switch.



TMB1780S

Figure 21



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 63. AIRFLOW SWITCH

Gas and Electric Tumblers

Refer to *Figure 22*.



## WARNING

To reduce the risk of fire, airflow switch operation may be affected by a clogged lint screen, lack of make-up air, obstructions at the thimble or in the customer installed main or collector ducts. These conditions must be checked and necessary corrections made before adjusting airflow switch. Always adjust airflow at installation.

W474

The airflow switch (located on the rear of tumbler, *Figure 22*, is set at the factory for proper operation. However, if there is a problem with the switch, it should be adjusted as follows:

**NOTE:** Steam models do not have an airflow switch.

**NOTE:** Control panel must be in place and access door closed before attempting to adjust airflow switch.

**IMPORTANT:** Airflow switch disc must remain closed during operation. If it opens and closes during the drying cycle, this indicates insufficient airflow through the tumbler. If switch remains open, or pops open and closed during the cycle, the heating system will shut off. The cylinder and fan will continue to operate even though the airflow switch is opened.

The airflow switch operation is controlled by the counterweight position on the shaft. Moving the counterweight either increases or decreases airflow switch sensitivity. The counterweight should be adjusted so the disc moves away from the cabinet when the lint panel is opened 1-1/2 in. (38.1 mm) with a full load. Adjust the airflow switch as follows:

- Load the tumbler. This adjustment is much faster to make with one person opening lint panel in front and another adjusting the counterweight in the rear of tumbler.
- Temporarily tape down the lint panel safety switch located behind the upper right corner of the lint panel.
- Start the tumbler. Open the lint panel 1-1/2 in. (38.1 mm). The airflow disc should move away from the cabinet, opening the switch contacts and shutting off the heat system. This indicates proper operation and proper adjustment.
- If switch is not opening as described in step 3, it should be adjusted so it is MORE sensitive. Depress the spring clip and move counterweight toward disc. Retest by opening lint panel and continue moving counterweight toward disc until switch operates as described in *Step c*.
- If switch opens BEFORE lint panel is opened the proper distance, step 3, it should be adjusted so it is LESS sensitive. Depress the spring clip and move counterweight away from the disc. Retest by opening lint panel and continue moving counterweight away from disc until switch operates as described in *Step c*.

**IMPORTANT:** Remove tape from lint panel switch.



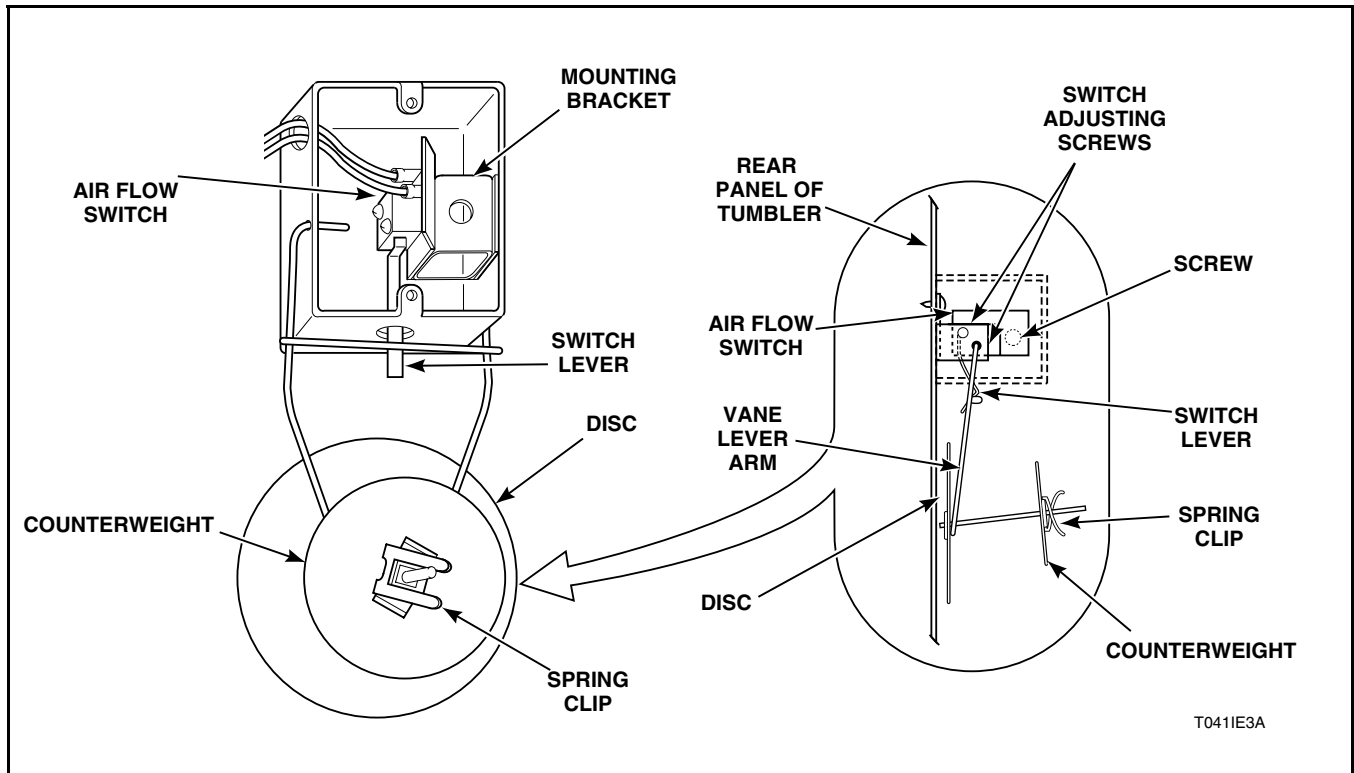


## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002



T041IE3A

Figure 22



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 64. LOADING DOOR STRIKE

Refer to *Figure 23*.

The door strike must be adjusted so it has sufficient tension to hold loading door closed against the force of a tumbling load. The door strike is properly adjusted when 8-15 lbs. (17.6-33 kg) of pull is required to open door.

To adjust, open door, loosen acorn nut and turn door strike screw in or out as required. Retighten acorn nut.

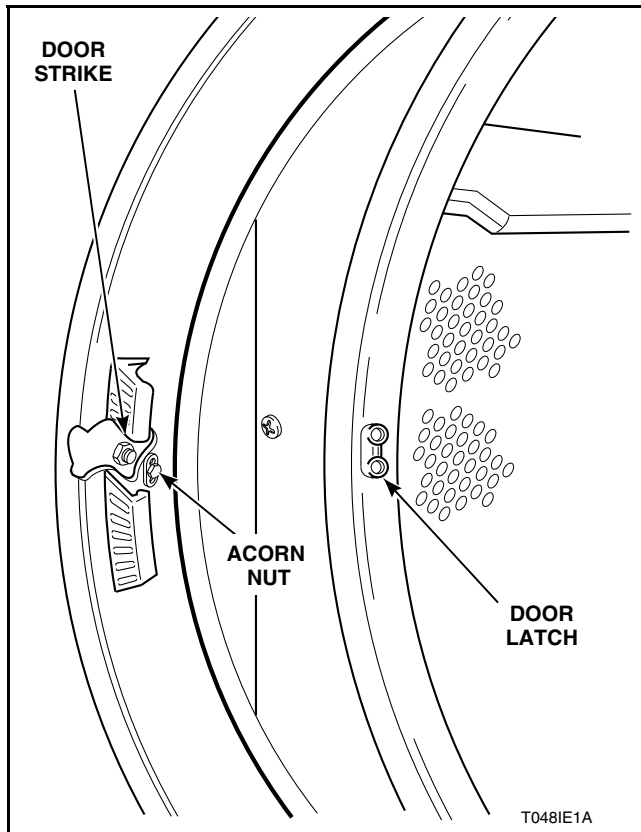


Figure 23

### 65. DRIVE BELT TENSION

Proper tension is when drive belt can be depressed 1/2 inch (12.7 mm) by applying light thumb pressure (approximately 5 pounds) at a point midway between sheave and motor pulley.

**Reversing Belt Drive Models:** Proper tension is when each cylinder belt can be depressed approximately 3/16 inch (4.77 mm) by applying light thumb pressure (approximately 5 pounds) at a point midway between the sheave and the idler.

#### Nonreversing Models:

Refer to *Figure 24*.

- Remove guard from rear of tumbler.
- Loosen idler housing capscrews holding idler housing to the housing support.
- Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing capscrews.
- Replace guard on rear of tumbler.

#### Reversing Models:

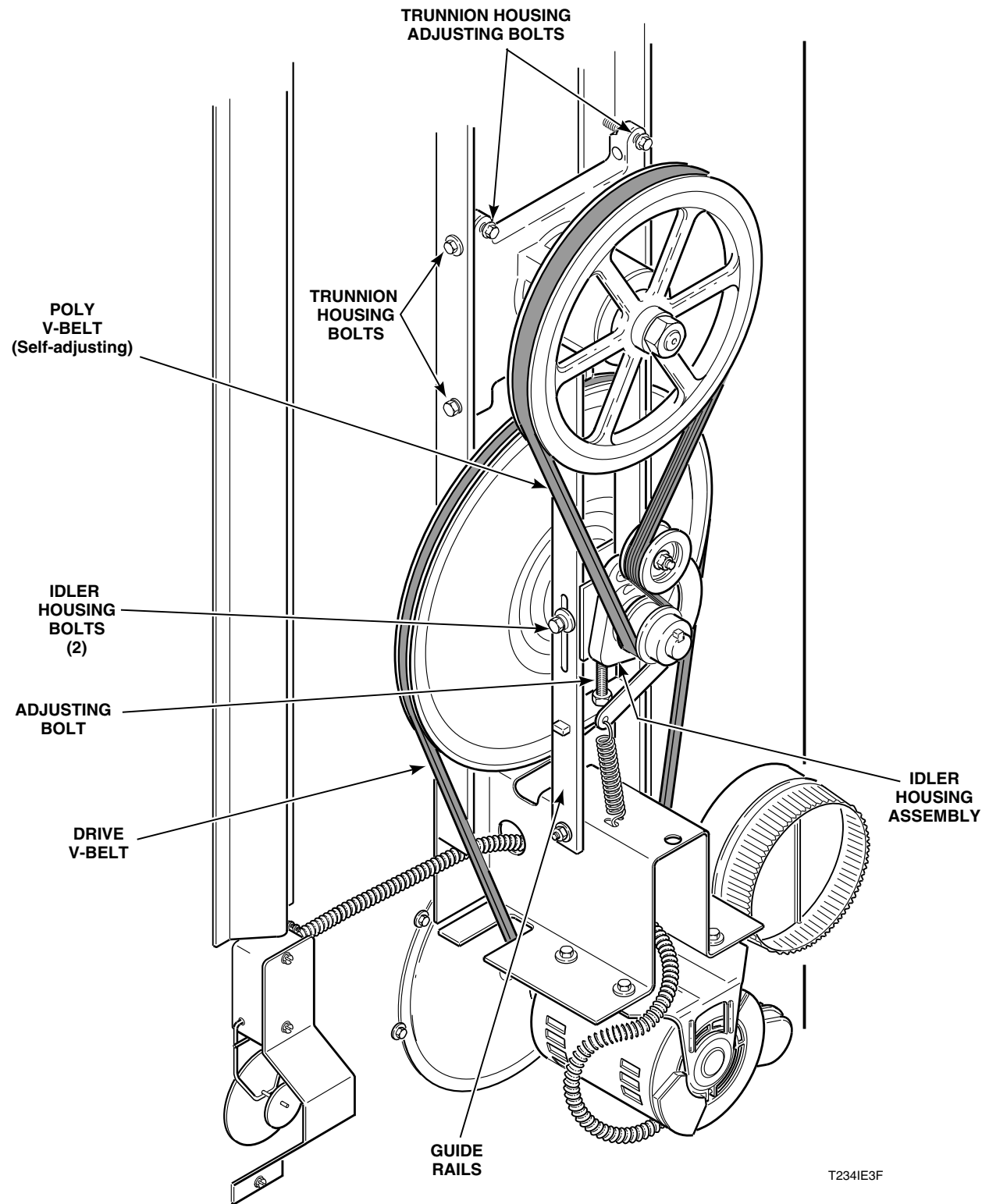
Refer to *Figure 25*.

- Remove guard from rear of tumbler.
- To adjust cylinder belt tension, loosen idler housing bolts holding idler housing assembly to the housing support.
- Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.

**NOTE:** Adjust cylinder belt tension first, then adjust motor to idler belt tension. Refer to *Figure 25*.

- Loosen the locking bolt.
- Loosen the adjusting nut and use the adjusting screw to move the motor up or down.
- Once proper belt tension is reached, retighten the adjusting nut and locking bolt.
- Replace the guard on rear of tumbler.

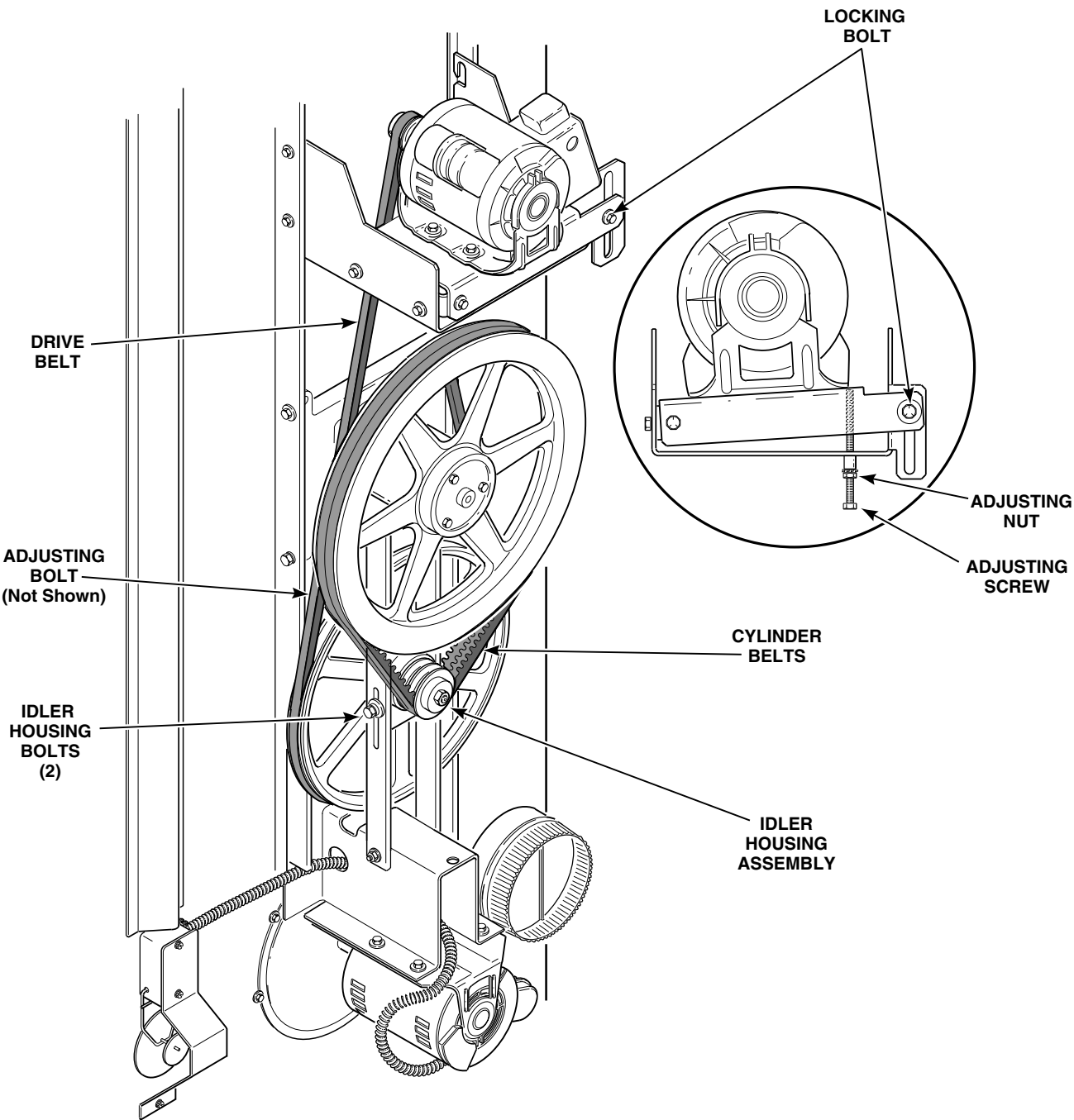
**NONREVERSING**



T234IE3F

Figure 24

REVERSING



T322IE3A

Figure 25



## WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumbler before servicing.
- Close gas shut-off valve to gas tumbler before servicing.
- Close steam valve to steam tumbler before servicing.
- Never start the tumbler with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.

W002

### 66. CYLINDER CLEARANCE

The clearance between the cylinder rim and front panel must be adjusted so the cylinder is centered within the front panel opening when the cylinder is fully loaded and is turning. However, the adjustment should be made when the cylinder is empty.

- Open loading door and check the gap between the center of the front panel top flange and the cylinder rim. Proper adjustment is when the gap is  $1/2 - 3/4$  inch (12.7 - 19.05 mm). Refer to Figure 26.
- Remove drive guard.
- Loosen the four trunnion housing bolts. Refer to Figure 24.
- Loosen the locknuts on the trunnion housing adjusting bolts. Refer to Figure 24.

- Turn the adjusting bolts in or out as necessary to obtain proper clearance between cylinder rim and front panel.

**NOTE: Turning the adjusting bolts clockwise will raise the cylinder and turning them counter-clockwise will lower the cylinder. Turn both bolts evenly to adjust top and bottom clearance. Turn one or the other adjusting bolt in or out to adjust side clearance.**

- After the cylinder is properly adjusted, tighten the adjusting bolt locknuts and the four trunnion housing bolts.
- Install the belt guard removed in Step b.

**NOTE: If adjusting the trunnion housing fails to correct the clearance, the problem is probably due to a worn trunnion shaft or bearings.**

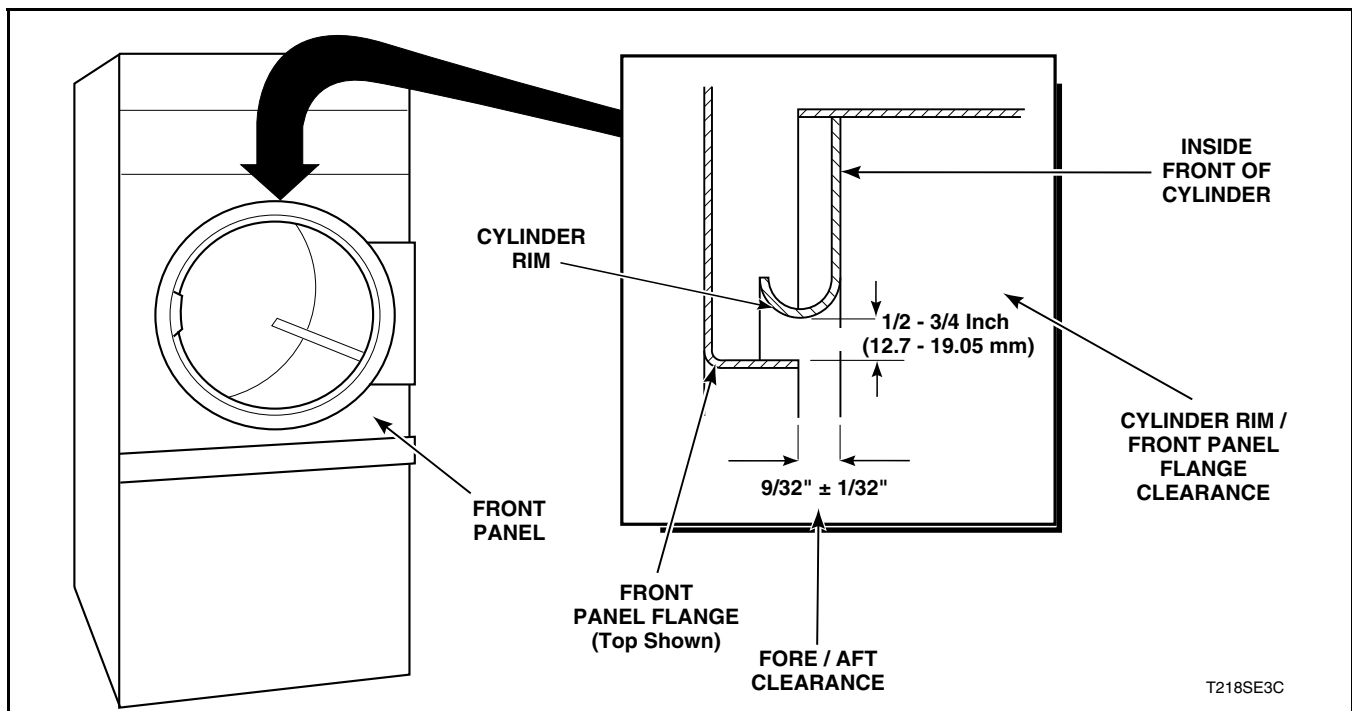


Figure 26